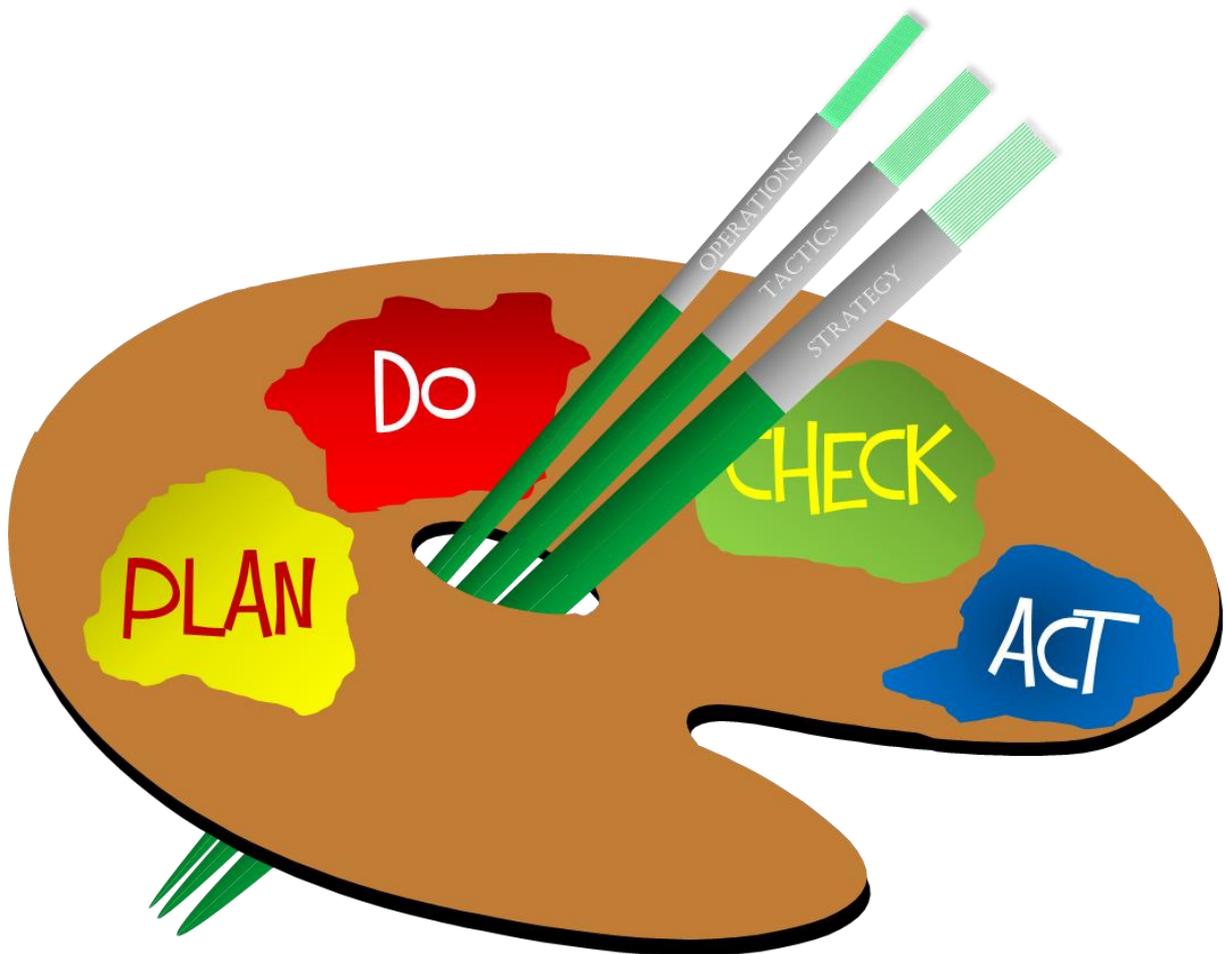




MANAGEMENT SYSTEM  
SPECIFICATION AND GUIDANCE  
MSS 1000:2023



FACILITATING THE CREATION OF  
MANAGEMENT SYSTEMS WITHOUT BOUNDARIES



## Executive Summary

MSS 1000:2014 is a universal [management system](#) standard enabling [organisations](#) to [create fully integrated management systems](#) directing and guiding their total [strategic, tactical](#) and [operational management processes](#). It avoids the need to comply with multiple [management system](#) standards covering separate aspects of performance such as [goods](#) and [services quality, health](#) and [safety, environment](#) and [security](#). [Commercial](#) and human [resource aspects](#) are also covered that are not normally explicitly addressed in [management system](#) standards.

Options are provided to self and externally [certify](#) against the standard and achieve bronze, silver and gold award. It has an integral [innovative scoring system](#) that enables the [organisation](#) to gauge its progress against the standard and to conduct internal and external performance [benchmarking](#).

The MSS 1000:2014 document contains nearly 300 pages. However, the requirements for compliance are contained within the 60 pages occupied by sections B and C, the rest of the document is supporting information and guidance. [Appendix 8](#) provides advice on getting started with this [MSS](#).

The [MSS](#) was written by an international team of [integrated management experts](#) to:

- Support the significant demand for [integrated management systems](#) which has grown significantly since the turn of the millennium,
- Demonstrate to doubters that a universal [management system](#) standard is possible and [practicable](#),
- Act as a [robust](#) foundation to stimulate further research, [innovation](#) and continual improvement in the practice of [integrated management](#).

MSS 1000 transcends silos and fragmented [management](#) approaches allowing disparate disciplines to jointly own and [cooperate](#) in the [creation](#) of an [integrated management system](#) fully focused on optimally delivering the [organisation's purpose](#) through its [structures](#) and [processes](#) rather than attempting to independently [manage](#) multiple dimensions of performance.

Implementing MSS 1000 will significantly improve:

- [Stakeholder](#) satisfaction while making the best use of resources,
- The [effectiveness, efficiency](#) and control of the [organisation's structures](#) and [processes](#),
- [Prospect and risk management](#),
- [Commercially responsible](#) and [socially responsible](#) performance,
- The [organisation's robustness, agility](#) and [resilience](#).

The widespread adoption of this [MSS](#) can make a significant contribution to global [economic, social](#) and [environmental](#) performance and its [sustainability](#).

## Dedication

This [management system](#) specification is dedicated to all those who act and labour selflessly for others and the common good including those as yet unborn that will follow the same path.

## Copyright

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Copies of this standard, and revisions, may be made freely without royalty provided that they remain true copies of the original except when creating draft amendment copies for submission to the Chartered Quality Institute Integrated Management Special Interest Group.

The content of this [Management System](#) Specification may be used for any [purpose](#) provided that the source is acknowledged. The use may include interfacing with or embedding or preloading in [software](#) designed to support or host [management systems](#).

## Feedback

We see further because we stand on the shoulders of those who have gone before us (Isaac Newton). One of the goals of creating this [MSS](#) is that it should be owned and shared by all of its [stakeholders](#) and act as a framework for facilitating the free flow and exchange of ideas and good practice. Feedback and suggestions are warmly welcomed with respect to the content, application, and exploitation of this [MSS](#). Please visit the web site [www.integratedmanagement.info](http://www.integratedmanagement.info).

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## Preface

The principal [objective](#) of this [management system specification \(MSS\)](#) is to provide instruction and guidance on [designing](#) and implementing [fully integrated management systems](#) that attempt to optimise the functionality of the whole of an [organisation](#). This is achieved by organizing the collective thought and [action](#) of the [organisation's](#) directors, managers and workforce, to [equitably](#) satisfy the [needs](#) and [expectations](#) of its [stakeholders](#), while making the best use of [resources](#). [Integrated management systems](#) do not recognise artificial and restricting [management](#) boundaries or silos. However, the [MSS](#) can still be used for existing or [planned](#) partial [management systems](#) and assist in aligning their [structure](#) for future integration.

*"It must be remembered that there is nothing more difficult to plan, more doubtful of success, nor more dangerous to manage than a new system. For the initiator has the enmity of all who would profit by the preservation of the old institution and merely lukewarm defenders in those who gain by the new ones." — Niccolò Machiavelli*

The [MSS](#) has been [created](#) by an international team of [Integrated Management Community \(IMC\)](#) experts. The specification is not just the merging of existing standards but has been based on universal [management principles](#). This has the effect of shifting the principal focus of [management](#) from multiple discrete facets of [performance](#), such as [goods](#) and [services quality](#), people protection and nurture, [environmental](#) protection, and [security](#) etc., directly onto the organisation's [structures](#) and [processes](#) that deliver its [purpose](#), where all [aspects](#) of [performance](#) emerge, and of critical interest to [stakeholders](#). The [MSS](#) includes both compliance [requirements](#) and guidance on how to optimize the equitable satisfaction of [stakeholders' needs](#) and aspirations while making the best use of [resources](#), which is the foundation of [integrated management](#).

The [MSS](#) is intended to provide [organisations](#) with a one-stop alternative to the current multiple [management system](#) standards that each focus on a different facet of [organisation performance](#). This should stimulate much [needed](#) continual improvement of [management system](#) standards in the marketplace. It should facilitate the creation of [fully integrated management systems](#) that not only cover the content of existing [management system](#) standards but also address the [commercial](#) and human [resource](#) issues in a fully integrated way going beyond simple alignment. This empowers [organisations](#) to bring all of their functionality within the scope of a [fully integrated management systems](#) that seamlessly spans all [aspects](#) of [strategy](#), [tactics](#) and [operations](#). This will nurture a culture of joined up: thinking, decision making and action, throughout the [organisation](#) from top [management](#) down to task level.

It has been the practice of many organisations to restrict the scope of their formal [management system](#) or systems to [goods](#) and [service quality](#), health and safety, and [environmental](#) protection, and to exclude human [resource](#) and commercial [processes](#). This [MSS](#) provides the [opportunity](#) to [create fully integrated management systems](#) that address the whole [organisation](#) in a truly joined up and coherent way and avoid the [need](#) to comply with multiple diverse [management system](#) standards. This enables better deployment of valuable finite [management resources](#) and empowers an [organisation](#) to improve its [effectiveness](#), [efficiency](#), [innovation](#), [robustness](#), [agility](#) and [resilience](#). It is able to experience the [synergistic](#) benefits of coherent [management structures](#) and [processes](#). Independent surveillance and [certification processes](#) are empowered to add more [value](#) through being more [effective](#) and [efficient](#).



'[Plan-Do-Check-Act](#)' is a [management](#) and learning cycle that humankind individually naturally do to varying degrees of [competence](#) but it does not happen naturally in a super organism, which we refer to as [organisations](#) – it has to be orchestrated via a [management system](#). A fully [effective](#), [efficient](#), [agile](#) and [resilient integrated management system](#) has the capability of promoting and facilitating the optimal functioning of '[Plan-Do-Check-Act](#)' throughout an organisation at every level. Its [effective](#) establishment becomes an indicator of high [performance](#) providing [stakeholder](#) confidence and satisfaction.

The [MSS](#) is an important [innovation](#) empowering [organisations](#) to gain valuable new [management](#) experiences. It is hoped that it will stimulate further [creative](#) thinking and research and help drive [continual](#) improvement in the understanding and application of [management systems](#) fit for the 21st century. The [MSS](#) can universally benefit every size and type of [organisation](#) and is why it is freely accessible via the World Wide Web, inspired by its inventor Sir Tim Berners-Lee.

## A. Introduction

The [purpose](#) of a [management system](#) standard or specification is to [define](#) good practice that should ideally be incorporated into a [management system](#) to achieve a specific functionality. However, no [management system](#) standard or specification can guarantee the [success](#) of an [organisation](#). The [purpose](#) of a [management system](#) is not to turn people into compliant automatons but to provide a coherent framework of direction and guidance enabling them to [operate](#), individually and collectively in an optimal way.

This [management system](#) specification ([MSS](#)) has been [defined](#) to enable [organisations](#) to [design](#) single fully [integrated management systems](#) with the [objective](#) of optimising the functionality of the whole of an [organisation](#) based on the universal [principles](#) of [integrated management](#). This [MSS](#) [defines](#) the minimum set of arrangements and methodologies to be established within the [management system](#) to act as a springboard for the [organisation](#) to [continually](#) improve and stay aligned with its [customer](#) and other [stakeholders'](#) evolving [needs](#) and [expectations](#). These features and [principles](#) provide confidence to [stakeholders](#) that it is fit for [purpose](#) by promoting a [systematic](#) and [integrated approach to management](#). By promoting orderliness and coherent, [effective](#) and [efficient processes](#) the [organisation](#) becomes more [agile](#) and [creative](#) in the delivery of its [purpose](#).

This [document](#) cannot cover all of the circumstances that may be encountered within [organisations](#). Every user must interpret the [requirements](#) according to the particular circumstances of the [organisation](#) and [identify](#) “what”, “how”, “where”, “who”, “when” and “why”, [as applicable](#). The seventeen [principles](#) underpinning the philosophy of this [MSS](#) are listed in A.6 [Management Principles](#).

Compliance with this standard will demonstrate that the [organisation](#) is [systematically](#) striving to implement the following [values](#) and [principles](#) that are [defined](#) within its [policy](#) – refer to C.1.3 [Policy statement](#).

- a) [Equitably](#) satisfies the [needs](#) and [expectations](#) of [stakeholders](#) making the best use of [available resources](#),
- b) Executes [responsible](#), [transparent](#) and compliant [commercial](#) transactions,
- c) Delivers high-[quality goods](#) and [services](#),
- d) Protects and nurtures people,
- e) Protects and nurtures the [environment](#),
- f) Optimises the functionality of [Plan-Do-Check-Act management](#) cycles throughout the [organisation](#) at every level to drive a [continual process](#) of experiential learning, improvement and alignment with evolving [stakeholder needs](#) and [expectations](#).

The [MSS](#) uses a set of universal rationalised [definitions](#) that attempt to transcend the terminology of individual [management](#) disciplines – refer to [Definitions](#).

The remainder of this introduction contains the following subsections:

- A.1.1 [Context of a Management System](#)
- A.1.2 [Plan-Do-Check-Act](#)
- A.1.3 [Universal PDCA Twelve Element Structure](#)

## A.1. MSS structure

There are three principal factors that have [determined](#) the [structure](#) of the [MSS](#) and are shown diagrammatically in Figure 1: MSS Structure Principal Influencers and are as follows:

- A set of basic [management principles defined](#) in section A.6 [Management Principles](#),
- Generic [Plan-Do-Check-Act](#) closed loop [management](#) cycles [required](#) to be performed throughout the [organisation](#) at all levels as described in section A.1.2 [Plan-Do-Check-Act](#),
- [Management system](#) good practice and [knowledge](#), which populates the [Plan-Do-Check-Act structure](#) using a twelve element hierarchical [taxonomy](#).

This [MSS document](#) contains the following principal sections covering the standard and integrated guidance:

- [Introduction](#)
- [General Requirements](#)
- [Specific Requirements](#)
- [General Requirements Guidance](#)
- [Specific Requirements Guidance](#)

It also contains a [Concise Table of Contents](#), a [Full Table of Contents](#), a [Preface](#), a [Bibliography](#), an [Index](#) and [Appendices](#).

Sections C. [Specific Requirements](#) and E. [Specific Requirements Guidance](#), are subdivided into identical [Plan-Do-Check-Act structures](#) addressing the twelve principal element [management](#) topic [taxonomy](#) adopted by this [MSS](#). It is intended to [create](#) logical orderliness and may if desired be carried over into the structuring of the [organisation's management system](#).

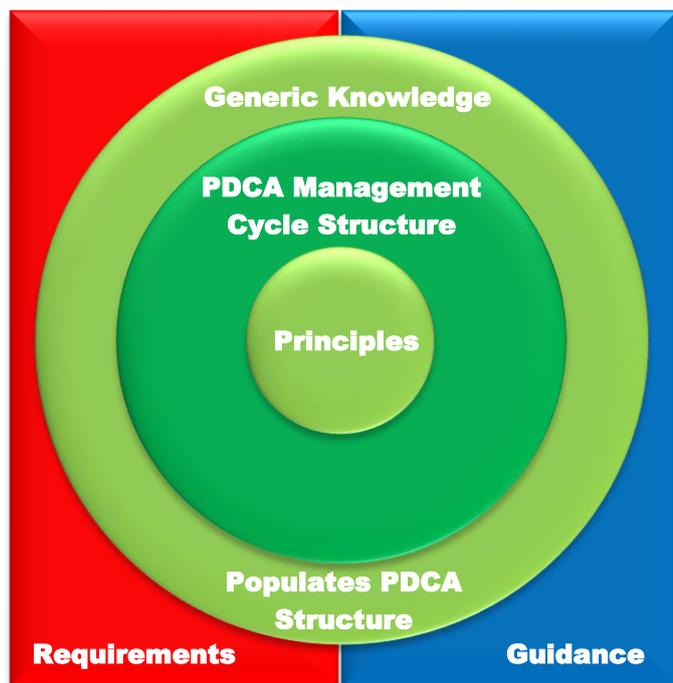


Figure 1: MSS Structure Principal Influencers

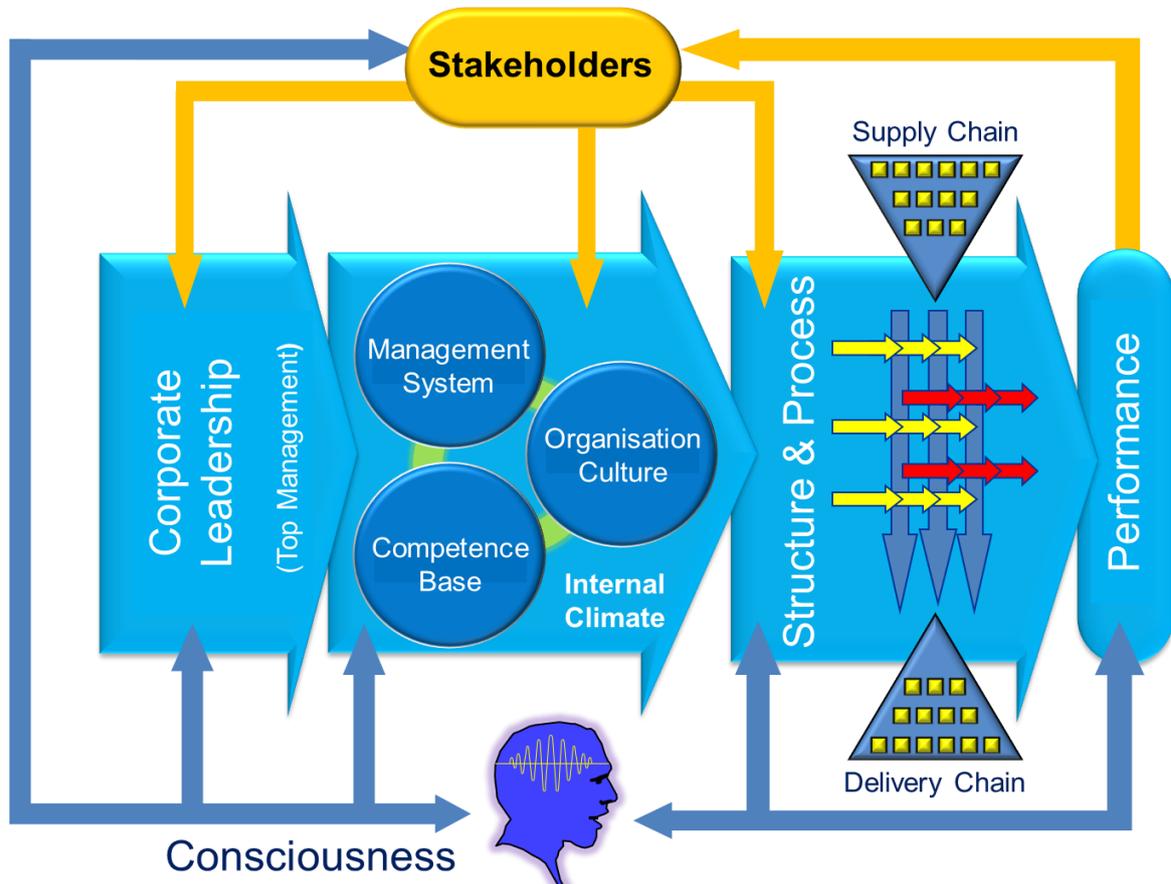
Extensive cross-references demonstrate the interdependency between the various [requirements](#) of the [MSS](#) and the resultant [management systems](#).

### A.1.1. Context of a Management System

The understanding of this section is not essential to applying the [MSS requirements](#) but it may help in understanding their rationale.

A well-[structured](#) and mature [management system](#) is one of the most valuable [assets](#) of an [organisation](#) and it helps to understand the context of a [management system](#) in relation to the [management](#) of an [organisation](#) as a whole and the other key elements that it interacts with. Although the nature and functioning of [organisations](#) are extraordinarily complex in reality, it is possible to gain valuable insights via simple conceptual models that aid their understanding and [management](#). A particular high-level conceptual model of an [organisation](#) is shown pictorially in Figure 2: Context of a

management system. The [purpose](#) and nature of the elements together with their overall interacting dynamics will be briefly explained in the following subsections to help put the concept of a [management system](#) into the overall context of the [management](#) of an [organisation](#).



**Figure 2: Context of a management system**

In smaller [organisations](#), the [roles](#) may be performed by the same person.

All of the elements in Figure 2: Context of a management system, have been subject to [management](#) research and are capable of being measured despite the commonly held view that they are abstract and difficult to understand.

A weak functionality in one area of the overall functionality of an [organisation](#) will not generally be compensated by a strong functionality in another area – an [organisation](#) is in general no stronger than its weakest link. While the [management system](#) is extremely valuable to an [organisation](#) it must be fully supported by its other elements. The elements are described in more detail in the following subsections:

- [Structure and process](#)
- [Performance](#)
- [Internal climate](#)
- [Management system](#)
- [Competence base](#)

- [Organisation culture](#)
- [Corporate leadership](#)
- [Stakeholders](#)
- [Consciousness](#)
- [Organisation dynamics](#)

## Structure and process

[Structure](#) and [process](#) exist to deliver [goods](#) and/or [services](#) to [customers](#) thereby fulfilling the [purpose](#) of the [organisation](#). [Value](#) is added by the core [structures](#) and [processes](#) sandwiched between the [organisation's supply chain](#) and its [customer delivery chain](#). Core [structures](#) and [processes](#) are in turn supported by supporting [structures](#) and [processes](#). [Contingency structures](#) may also exist to takeover or provide assistance when core or supporting [structures](#) and [processes](#) fail or otherwise become dysfunctional or the [organisation](#) or a [project](#) becomes [threatened](#).

[Structures](#) host the [processes](#) that transform inputs into outputs and typically include:

- People ([tacit knowledge](#) - [employees](#), contractors, visitors),
- [Commerce](#) (relationships, agreements, [contracts](#), regulation),
- [Data](#) (information, virtual [assets](#), [explicit knowledge](#),
- Energy and matter (land, buildings, plant, equipment, machinery, vehicles),
- [Suppliers](#) of [goods](#) and [services](#),
- [Goods](#), [services](#) and various forms of [waste](#).

[Structures](#) and [processes](#) should ideally all add optimal [value](#) separately and collectively as a whole. This is often conceptually understood as [value](#) adding chains linking the [supplier](#) inputs to the [organisation's](#) output to its [customers](#).

The most critical elements of [structures](#) and [processes](#) are people and it is their [behaviour](#) that is influenced by the elements shown to the left of [structure](#) and [process](#) on Figure 2: Context of a management system.

## Performance

The [performance](#) of [structure](#) and [process](#) is the measure of the satisfaction of the [organisation's customers](#) and other [stakeholders](#), which are generally evolving and often becoming more sophisticated and demanding. [Requirements](#) for [performance](#) may be shared or may differ amongst the [customers](#) and other [stakeholders](#).

General ideal [performance](#) is total realization of the [organisation's policy](#), [strategic plan](#) and [objectives](#), including total satisfaction of the [stakeholder's needs](#) and [expectations](#) while making the best use of [resources](#). This ideally results in:

- High profitability,
- [Safe](#) and nurtured personnel, [assets](#) and [environment](#),
- Zero [unplanned events](#) (including accidents and [near misses](#)).

[Uncertainty](#) pervades everything to some degree and [performance](#) cannot be guaranteed. However, attempts to optimize [performance](#) can be made through carefully [managing prospects and risks](#).

## Internal climate

In a similar way to a weather climate dictating what will grow and flourish on land located in different parts of the world, an [organizational](#) climate supports and nurtures an [organisation's structures](#) and

[processes](#) ability to deliver the [performance required](#) by its [customers](#) and other [stakeholders](#). The internal [organisation](#) climate comprises three closely interacting components which direct, guide and support the human [behaviour](#) that manages and participates in [processes](#):

- [Management system](#),
- [Organisation culture](#),
- [Competence base](#).

These three interacting [organizational](#) elements are elaborated in the following three sections.

## Management system

The [management system](#) comprises the [organisation's policy](#), [responsibilities](#), [structures](#), [procedures](#) and rules, and collectively [defines](#) the way that the [organisation's structures](#) and [processes](#) are to be established, [maintained](#), and [operated](#) and where necessary changed. Without a [management system](#) the [organisation's](#) managers have to decide what should be done uniquely in every situation and constantly seek direction, guidance and approval from superiors which makes the [management process ineffective](#) and [inefficient](#).

A [management system](#):

- Allows directors and managers to establish generic approved direction and guidance supporting managers and personnel at all levels,
- Free up [management resource](#) to focus on the development of the [organisation](#),
- Acts as a [defined](#) basis for [review](#) and [action](#) to improve and remain aligned with [customer](#) and other [stakeholder](#) evolving [needs](#) and [expectations](#).

Compliance with the [management system](#) and the efforts made to improve it are strongly influenced by the alignment of the [organisation culture](#) with [performance](#) supporting [behaviours](#). Personnel may either fail to comply with the [management system](#) through ignorance, [human error](#) or [human violation](#).

The ability to [design](#), implement and [maintain effective](#) and [efficient management system](#) depends on the [competence base](#) of the [organisation accessed](#) internally or externally.

A good [management system](#) shapes [organisation culture](#) by directing, guiding and nurturing [performance](#) by supporting positive [behaviours](#) and practices which staff later learns to [value](#). For example, if the [management system](#) requires a periodic activity such as [project](#) induction and briefings, over time the activity will tend to become a natural one, and will become absorbed into the [organisation culture](#).

A successful [management system](#) implementation critically depends on [corporate leadership](#) and commitment but cannot be orchestrated by the [management system](#). The [MSS](#) does not therefore contain any [requirements](#) for [corporate leadership](#) commitment – a successful [management system](#) implementation is the demonstration of [corporate leadership](#) commitment.

Advanced [management systems](#) also have an integral self-referral aspect that manages its own change and evolution. This is the reason why one of the [MSS](#) elements addresses the [management](#) of change including the [management system](#).

## Competence base

The [competence base](#) that an [organisation](#) has [access](#) to (either directly within the [organisation](#), or indirectly outside the [organisation](#)) is of critical importance. The [effective](#) conduct of [prospect and risk assessments](#) and the application of appropriate [management control](#) depends on a sound understanding and experience of the relevant laws of nature that govern the [performance](#) of the [organisation's structures](#) and [processes](#).

A suitable and sufficient [competence base](#) is also a prerequisite for establishing an [effective](#) and [efficient management system](#).

The [competence base](#) needs to evolve over time to support the evolving needs of an [organisation](#) and its evolving [management system](#).

When establishing [structures](#) and [processes](#), or modifying them, care must be taken always to act within the [competence base](#), and not turn [structures](#) and [processes](#) into uncontrolled experiments.

The [organisation culture](#) should include a strong resistance to gambling when the implications of a proposed [structure](#) or [process](#) change are not fully understood.

## Organisation culture

[Organisation culture](#) comprises the shared: attitudes, perceptions, beliefs, [values](#), social [behaviour](#), and accepted work practices or norms. It is a natural manifestation where there are groups of people and is socially driven. People naturally desire to conform to group norms to gain acceptance by the group and receive its benefits.

A [performance](#) supporting [organisation culture](#) is one in which all staff, from top level [management](#) to individual [workers](#); share a commitment to work in a way that positively promotes all facets of the [organisation's performance](#).

[Sub-organisation cultures](#) may exist within the overall [organisation culture](#) where the [aspects](#) are shared by a particular subgroup.

[Organisation culture](#) is shaped by all of the other [organizational](#) components in Figure 2: Context of a management system, but cannot be directly [managed](#) or imposed in a similar way to a [management system](#). A [performance](#) supporting [organisation culture](#) can only be nurtured by directing and encouraging [performance](#) supporting human [behaviours](#) via visible and clear [corporate leadership](#) and strict compliance with the [management system](#) which is administered firmly and justly.

## Corporate leadership

[Corporate leadership](#) is exercised by the [top management](#) at the most senior level of an [organisation](#), typically by the directors and [CEOs](#) – it is the directing mind of the [organisation](#). It expresses the [vision](#) of the [organisation's](#) future, and initiates, [plans](#) and [resources](#) its overall direction to fulfil its [vision](#) and [purpose](#).

[Corporate leadership impacts](#) the [management system](#), the [organisation culture](#) and the [competence base](#) by formulating a corporate [vision](#), [strategic plan](#) and [objectives](#). [Corporate leadership](#)

commitment is demonstrated by the establishment of an [effective](#) internal [organisation](#) climate comprising the [management system](#), [competence](#) case and [organisation culture](#).

## Stakeholders

The [organisations stakeholders](#) are the people and bodies that have an interest in the [performance](#) of the [organisation](#) and reside within and outside of the [organisation](#). [Stakeholders](#) typically include [customers](#), [suppliers](#), [employees](#), society, government, regulators, shareholders, contractors, partners, banks, insurers etc.

The [needs](#) and [expectations](#) of [stakeholders](#) may coincide or conflict. The challenge for [organisations](#) is to [equitably](#) meet the [needs](#) and [expectations](#) of [stakeholders](#) while making the best use of [resources](#).

[Customers](#) are critically important to [maintain commercial](#) trading fulfilling the [purpose](#) of the [organisation](#) but other [stakeholders](#) such as insurers, banks and regulators can be equally powerful and stop an [organisation's operations](#) immediately.

## Consciousness

[Consciousness](#) is the most abstract of the [organizational](#) elements and therefore generally the least understood despite its critical importance to individual and group [performance](#). [Management](#) is conducted on the level of [consciousness](#), which is the home of thought, judgement and decision-making. [Consciousness](#) is the foundation of all of the other [organisation](#) components contained in Figure 2: Context of a management system. It is because humankind is [conscious](#) that they are able to attempt to understand the world they inhabit and [manage](#) the exploitation of its [resources](#). [Organisations](#) would not be [continually created](#) and [sustained](#) delivering valuable [goods](#) and [services](#) if it was not for [consciousness](#) that is the foundation of all [creativity](#) - humankind is able to [envision](#) something before its [creation](#). [Stakeholders](#) are only able to form a view of an [organisation](#) because they are [conscious](#) human beings. Being [conscious](#) means being able to receive [data](#) via the senses and understand one's [environment](#), being aware of [needs](#) and [expectations](#), being able to think and make decisions or execute an [action](#) that influences an [organisation](#). [Commercial](#) activity is fundamentally an interplay on the level of [consciousness](#).

[Consciousness](#) is ideally - alert, intelligent, understanding, empathetic, compassionate, flexible, positive, [creative](#), questioning, [responsible](#) etc. It is [threatened](#) by [stress](#), fatigue, alcohol, drugs and [ill health](#). A key characteristic of [consciousness](#) is its self-referral nature, which allows [consciousness](#) to know itself e.g. humans have the ability to doubt their own existence, which any inanimate object, machine or computer cannot.

The level of [consciousness](#) of a person forms a spectrum from the person who behaves in a totally self-serving way ([unethical](#) and/or criminal) to a fully enlightened person who always thinks and acts for the greater good. Higher levels of [consciousness](#) can be nurtured by good [management](#) practice and personal self-development.

## Organisation dynamics

In practise, all of the [organisation's](#) components are [continually](#) interacting in a very complex way and it is not always clear what is happening when problems occur or an [event](#) is being [investigated](#). to

[manage effectively](#) and resolve [organizational](#) weaknesses it is essential that all of the organisation's dynamic components are addressed including; the [management system](#), the [organisation culture](#), the [knowledge-base](#), the [corporate leadership](#), the [organisation's consciousness](#), and the stake-holder [needs](#) and [expectations, as applicable](#). This enables the [organisation's management](#) to take control of its [strategic](#), [tactical](#) and [operational processes](#).

Unlike the other components (except [consciousness](#)), which may change or be rapidly changed in a very short time period, [organisation culture](#) evolves very slowly over several years. Because the nature of [organisation culture](#) inhibits change, it resists positive change but helps stabilise it once it is attained.

In contrast to the nature of [organisation culture](#), the following are examples of how the [non-organisation culture](#) components may change rapidly:

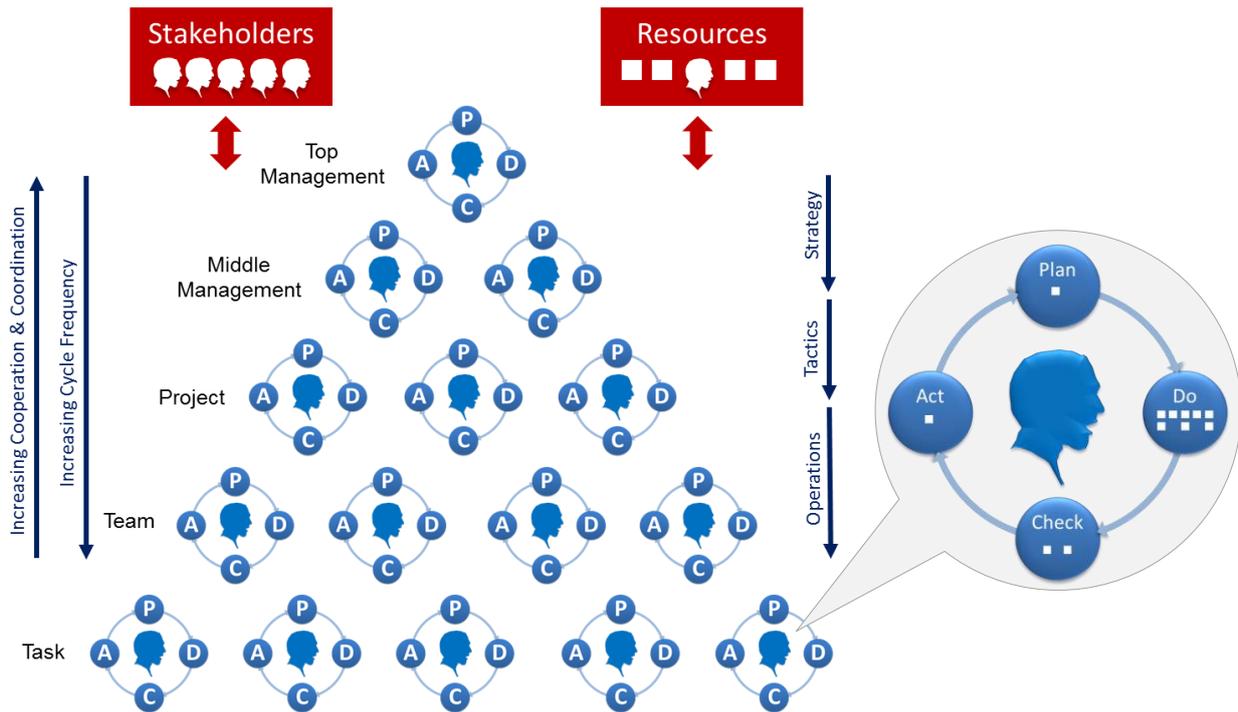
- A [management system](#) can be changed by simply signing and distributing a new [document](#),
- The [competence base](#) can be extended by the employment of a new specialist,
- [Top management](#) may change following an [organisation](#) take-over,
- A [stakeholder](#) may enact new legislation on a given day,
- [Consciousness](#) changes throughout the day, e.g. night-work is different to day-work.

[Consciousness](#) is unusual because it is subject to long-term change as well as short-term transient change.

### **A.1.2. Plan-do-check-act**

[Plan-Do-Check-Act](#) (PDCA) is a cycle that individual people naturally follow to varying degrees of [competence](#). [PLAN](#) is the preparation for doing something. DO is the execution of the [PLAN](#). CHECK is [monitoring](#) to confirm the [PLAN](#) is being properly followed during DO and that nothing unexpected occurs. Finally during ACT a [review](#) of [PLAN](#), DO and CHECK [processes](#) is conducted to see if the approach used can be improved the next time around plus agreeing [actions](#) to make it happen.

PDCA is therefore a natural potentially universal cycle of [continual](#) learning and [continual](#) improvement applicable to [organisation strategy](#), tactics and operations. The fourth element ACT can also be conducted [proactively](#) to ensure that the [organisation](#) remains aligned with future [stakeholder needs](#) and [expectations](#) by trying to anticipate future [likely innovation](#) and change.



**Figure 3: Universal Plan-Do-Check-Act throughout an organisation**

It should be noted that while PDCA tends to be natural in individuals it is not natural in [organisations](#) and needs to be orchestrated via a [management system](#), which needs to be formalised for anything other than small simple [organisations](#).

The aim of this [MSS](#) is to optimally and harmoniously establish PDCA throughout an [organisation](#) at every level to [equitably](#) satisfy the [stakeholder needs](#) and [expectations](#) making the best use of [resources](#) including people, finance, [data](#), matter and energy, and [suppliers](#) – refer to Figure 3: Universal Plan-Do-Check-Act throughout an organisation. It should be noted that the PDCA [management](#) cycle tends to be more dynamic towards the lower levels of the [organisation](#) and the [need](#) for cooperation and coordination of activities tends to increase towards the higher levels of the [organisation](#).

### A.1.3. Universal PDCA twelve element structure

These four [Plan-Do-Check-Act](#) elements are further expanded into the twelve elements shown in Figure 4: Universal Plan-Do-Check-Act Twelve Element Structure. These represent twelve logical hierarchical [structures](#) used to [structure](#) the [requirements](#) and the guidance contained within this standard and may also be used to similarly [structure](#) an [organisation's fully integrated management system](#) if desired.

The substructures of each of these twelve elements are shown in figures at the start of each of the twelve sections of part E of the MSS – refer to [List of Figures](#).

#### Plan

Element 1 covers the [analysis](#) and [synthesis processes required](#) before the execution of the tasks or [processes](#). It includes foundation [planning](#), [strategic planning](#), formulation of [policy](#) and [objectives](#), [identification](#) of applicable legislation and standards, and [prospect and risk assessment](#).



## Do

Elements 2 to 9 comprise eight elements, each defining a specific area requiring [management control](#) and guidance. Elements, 2 to 5, cover personnel, [commerce](#), [data](#), energy and matter, and [suppliers](#), and represent the five general ingredients of an [organisation's structures](#) and [processes](#). Element 6 covers the [normal structures](#) and associated [normal processes](#) that deliver the [purpose](#) of the [organisation](#). Element 7 covers [contingency structures](#) and [processes](#) that [need](#) to be initiated when [normal structures](#) and [normal processes](#) become dysfunctional or abnormal situations need to be [managed](#). Element 8, the final one within this group, covers the [systematic management](#) of temporary and permanent change including changes to the [management system](#).

## Check

Elements 10 and 11 address [reactive](#) and [proactive management processes](#). Element 10, [reactive investigation](#), involves the reporting and [analysis](#) of internal and external [events](#), including [near misses](#) so that the [organisation](#) may learn from them. Element 11, [planned monitoring](#), involves activities such as [audits](#), [inspections](#) and [benchmarking](#), and are used to confirm that the 'Plan' has been implemented, is being complied with and is delivering its intended [performance](#). Both of these elements are important, complementary and provide [data](#) for lagging and leading [key performance indicators](#).

## Act

Element 12 covers the [review](#) of all [aspects](#) of the [organisation's performance](#) and the assignment of [actions](#) to drive [continual](#) improvement and alignment with its [stakeholders](#) evolving [needs](#) and [expectations](#).

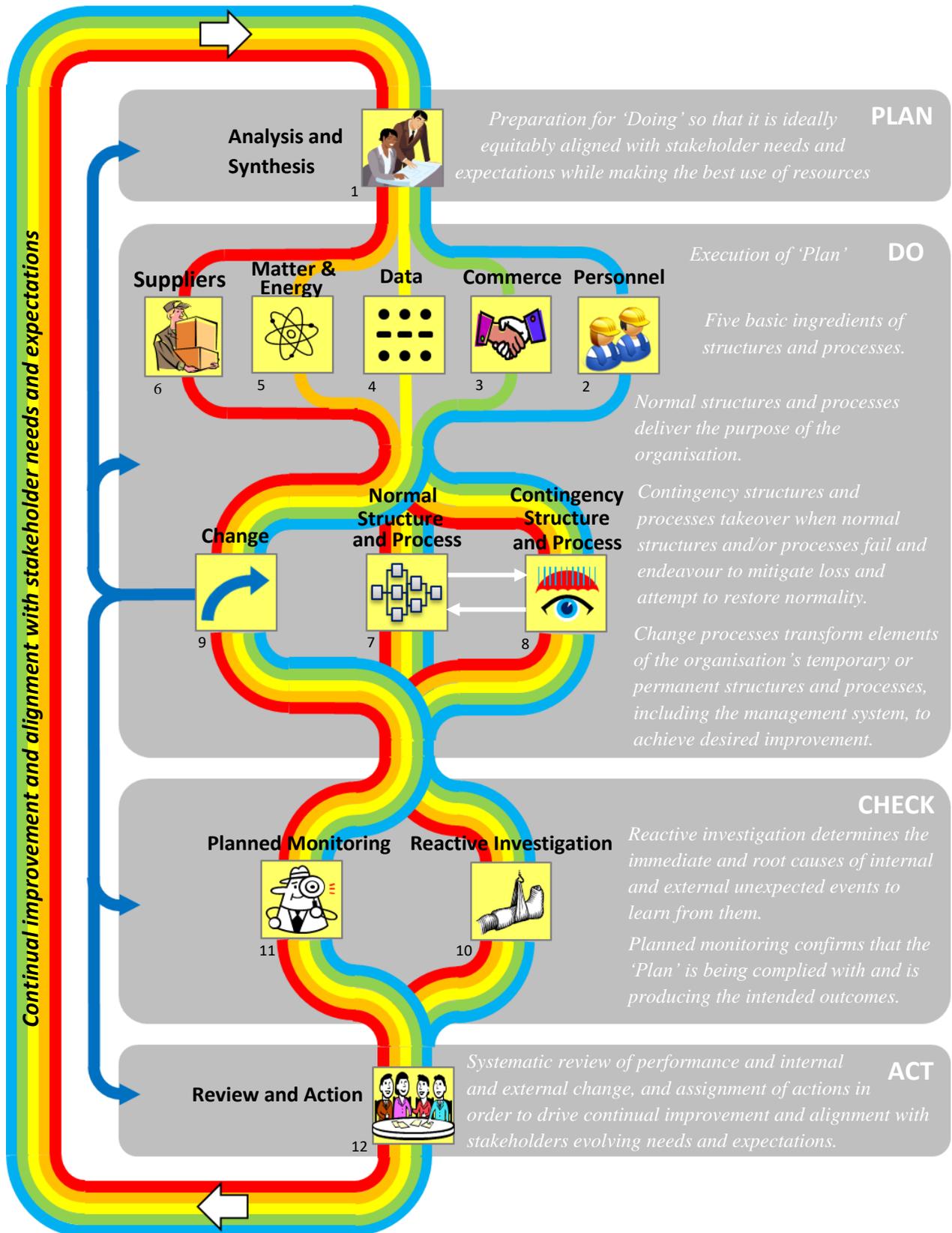


Figure 4: Universal Plan-Do-Check-Act Twelve Element Structure

The [purpose](#) of each of these twelve elements is further elaborated during the introductions to twelve subsections of section E. [Specific Requirements Guidance](#). Refer to [Concise Table of Contents](#).

## A.2. MSS navigation

This [document](#) may be navigated in paper or electronic form via the [Table of Contents](#) or [Index](#) although it is recognised that its predominant use will be in electronic form, which offers enhanced functionality. The electronic version has extensive hyperlinking that [significantly](#) aids navigation and assists the user to focus on what is immediately needed within the [MSS](#). It is a large [document](#) containing a large amount of material supporting the [requirements](#) section.

It should be noted that whilst the [concise table of contents](#), [full table of contents](#), [list of figures](#) and [list of tables](#) contain embedded hyperlinks, the [index](#) only supports navigation via the page numbers.

Paragraphs in the standard [requirements](#) sections ([General Requirements](#) and [Specific Requirements](#)) and the corresponding guidance sections ([General Guidance](#) and

[Specific Guidance](#)) can be toggled via hyperlinks that have been inserted at the start of the paragraphs. These links are indicated by the symbols ∞ and < corresponding to the standard [requirement](#) and guidance respectively.

Links to [definitions](#) have been [created](#) throughout the [document](#) and compound [definitions](#) contain links to [definitions](#) of elemental components forming a hierarchy.

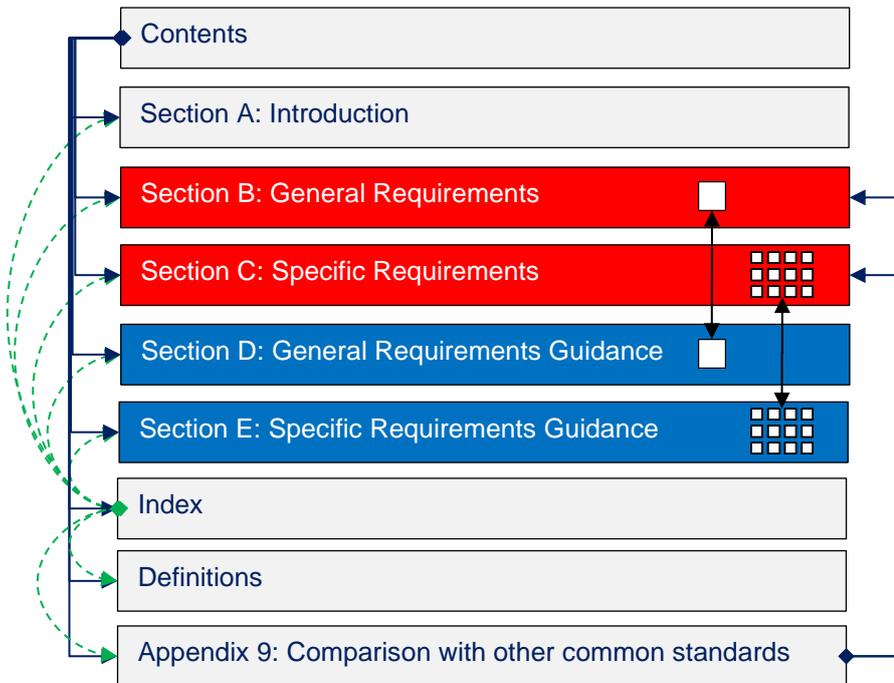
Users familiar with other commonly used standards may find it helpful to consult [Appendix 9](#) and having located the section of the familiar standard; use the hyperlink within the [MSS](#) column to locate the [requirements](#) in section B or C of this [document](#).

The [MSS](#) contains embedded electronic bookmarks facilitating direct [access](#) to the [MSS](#) sections via hyperlinking from external [documents](#) and [databases](#).

The [IMC website](#) has an embedded PDF application facilitating the exploitation of all the above features.

## A.3. MSS scope

This [MSS](#) is applicable to all types and sizes of [organisation](#) and covers all facets of [organisation performance](#) that may potentially [impact stakeholder needs](#) and [expectations](#). A business aims to be



**Figure 5: MSS Navigation**

profitable while other [organisations](#) such as a charity or regulatory body must be [commercially](#) viable. It covers the [commercial aspects](#) of all types of [organisation](#). Some clauses of this [MSS](#) are exempt for certain sizes of [organisation](#) – refer to section A.5.3 [Organisation size automatic clause exemptions](#).

#### A.4. Covert management arrangements

Formal [covert arrangements](#) are addressed within this [MSS](#) to achieve [security](#) from [conflicting stakeholders](#) and malevolent [threats](#). Sections B [General Requirements](#) and C [Specific Requirements](#) contain [requirements](#) that may need to be applied [covertly](#). The following sections address such [requirements](#):

- B.3 [Stakeholder specific requirements](#),
- C.1.1 [Foundation planning](#),
- C.1.3 [Policy statement](#),
- C.1.6 [Prospect and risk assessment](#),
- C.1.6.1 [Prospect and risk assessment planning](#),
- C.2.2 [Responsibilities and authorities](#),
- C.2.5.2.2 [External communication, consultation, participation and reporting](#),
- C.4.1 [Management system structure](#),
- C.4.2 [Data Control](#),
- C.4.2.10 [Data Access](#),
- C.10 [Reactive Investigation](#),
- C.11 [Planned monitoring](#).
- C.12 [Review and Action](#) and subsections.

#### A.5. Compliance, certification and scoring

The [MSS](#) facilitates compliance scoring, the award of bronze, silver and gold compliance levels and independent third party [certification](#) covered in the following subsections:

- A.5.1 [Compliance scoring system](#),
- A.5.2 [Compliance award levels](#),
- A.5.3 [Organisation size automatic clause exemptions](#),
- A.5.4 [Certification](#).

##### A.5.1. Compliance scoring system

A compliance scoring [system](#) is [defined](#) in [Appendix 1: Compliance Scoring System](#) and permits the computation [compliance scores](#) and [minimum and maximum scores](#) for an [organisation](#) or a [project](#) following an [audit](#). Only the sections of the [MSS](#) that are applicable are scored.

NOTE: Minimum scores are critically important because the [effectiveness](#) of a [management system](#) depends on the collective functioning of all elements [defined](#) within this standard and a weak functionality in one area will not generally be compensated by a strong functionality in another area – an [organisation](#) is in general no stronger than its weakest link.

The scoring [system](#) is used in the determination of bronze, silver and gold award levels covered in section A.5.2 [Compliance award levels](#) and may also be used in [benchmarking](#) as per section C.11.6 [Survey and benchmarking](#).

### A.5.2. Compliance award levels

This standard permits compliance at bronze, silver and gold levels shown diagrammatically in Figure 6: Compliance Award Levels, which respectively correspond to a basic, good and excellent implementation of a [management system](#) with respect to the [effectiveness](#) and [efficiency](#) functionality creating orderliness and the degree that the [management](#) of the [organisation](#) is of [management structures](#) and [processes](#). All levels [require](#) legal compliance.

The silver level generally requires a demonstration of commitment and compliance to [commercial responsibility](#), and the gold level requires a commitment and compliance to [social responsibility](#). The level of award depends on the degree of compliance of specified clauses within the [MSS](#). [MSS](#) clauses applicable to silver and gold levels are marked with an [\[S\]](#) or [\[G\]](#) respectively. The degree of compliance scoring is covered in [A.5.1 Compliance scoring system](#).

Some clauses of the [MSS](#) are exempt for bronze compliance and silver and gold require compliance with additional clauses and general compliance to a higher standard.

Bronze requires that for clauses not marked with an [\[S\]](#) or [\[G\]](#) a minimum compliance score of 0.8 is achieved with a minimum compliance factor of 0.7.

Silver requires that for all clauses not marked with a [\[G\]](#) a minimum compliance score of 0.9 is achieved with a minimum compliance factor of 0.8.

Gold requires that a minimum compliance score of 0.9 is achieved for all clauses with a minimum compliance factor of 0.9.

Clauses with a silver or gold rating may be a mandatory [stakeholder requirement](#) or a legal [requirement](#) in some countries. Legal compliance is [required](#) for bronze level compliance.

Auditors assessing silver and gold level [requirements](#) must be suitably qualified and experienced in the enhanced [requirements](#).

### A.5.3. Organisation size automatic clause exemptions

Some [requirements](#) of this [MSS](#) are automatically exempted for particular [sizes of organisation](#) with clauses marked as follows:

- a) Micro exempt [\[≠μ\]](#)
- b) Micro and Small exempt [\[≠μS\]](#)
- c) Micro, Small and Medium exempt [\[≠μSM\]](#)
- d) Large – not applicable.

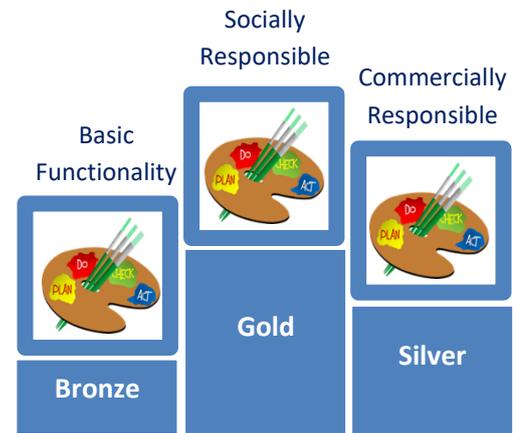


Figure 6: Compliance Award Levels

The [organisation](#) shall [define](#) and [record](#) its size in terms of staff numbers as per section B.1 [Scope of organisation's arrangements](#). Exemptions shall lapse twelve calendar months after the time the [organisation](#) exceeds a size [classification](#) through growth.

#### A.5.4. Certification

If the scope of the [management system](#) is unrestricted as per section B.1 [Scope of organisation's arrangements](#), this [MSS](#) may be used for the following forms of [management system certification](#):

- a) Self-[certification](#) by the [organisation](#) (Bronze level only),
- b) [Certification](#) of its [suppliers](#) by an already [certified organisation](#) (Bronze level only),
- c) [Certification](#) of an [organisation](#) by an independent [certification](#) body (Bronze, Silver or Gold level).

Where the scope is restricted, this [MSS](#) may be used for the following form of [management system certifications](#):

- d) Self-[certification](#) by the [organisation](#) (Bronze level only),
- e) [Certification](#) of its [suppliers](#) by an already [certified organisation](#) (Bronze level only),
- f) [Certification](#) of an [organisation](#) by an independent [certification](#) body (Bronze, Silver or Gold level).

Where [certification](#) status is [communicated](#) to another body, including advertising, the [certification](#) level shall always be accompanied with 'self-[certified](#)' and/or 'a [definition](#) of the restricted scope' where applicable.

[Covert arrangements](#) may be excluded from independent [certification](#).

#### A.6. Management principles

This [MSS](#) has been created by focusing on first [principles](#) rather than a superposition of existing [management system](#) standards. It has been attempted to design the [MSS](#) so that it is both elegant and functional. The first issue of this standard in 2014 took account of 17 guiding [principles](#) contained in this section of the standard. These have since been extended and published in the IMC Paper: Integrated Management Definition and Elaboration. They are also directly accessible via the Integrated Management Community (IMC) website.

Optimal [synergistic](#) benefit will be received if the [principles](#) are applied collectively rather than in isolation.

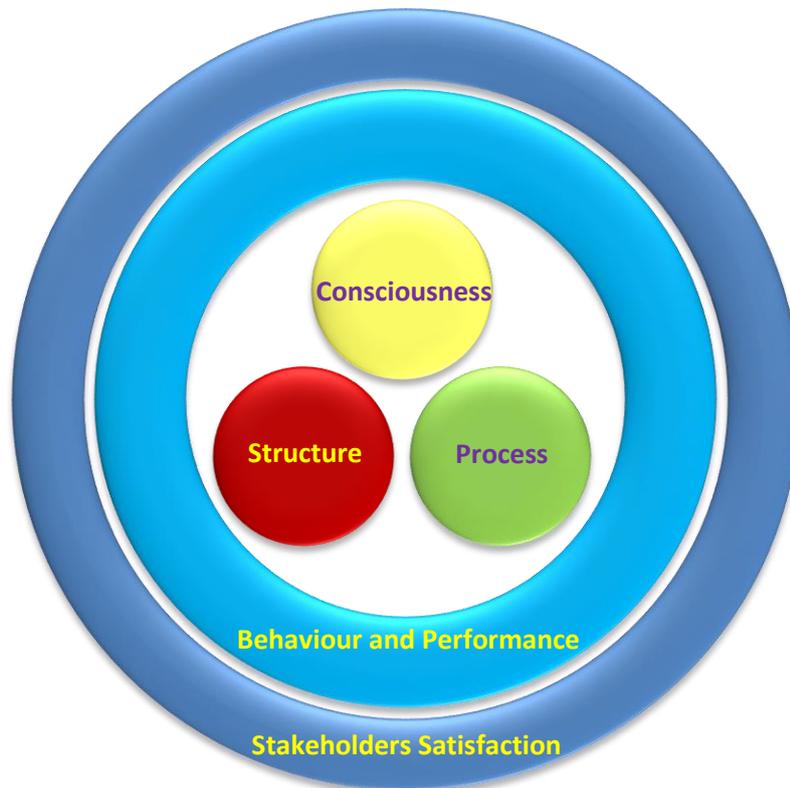


Figure 7: Essence of an Organisation

### A.7. MSS user interfaces

While this [MSS](#) may be used directly by a manager within an [organisation](#) this is generally not the most [effective](#) or [efficient](#) way of obtaining optimal [value](#). It is strongly recommended that [organisations](#) seek advice from their trade body or other [expert](#) adviser with regard to the best way to interact with this [MSS](#).

The [MSS](#) may be interfaced directly with users or indirectly via an internal or external consultant or paper or electronic application – refer to Figure 8: MSS User Interfaces. The [MSS](#) contains electronic bookmarks to permit electronic applications to directly interface with its sections via hyperlinks – refer to section A.2 [MSS navigation](#).

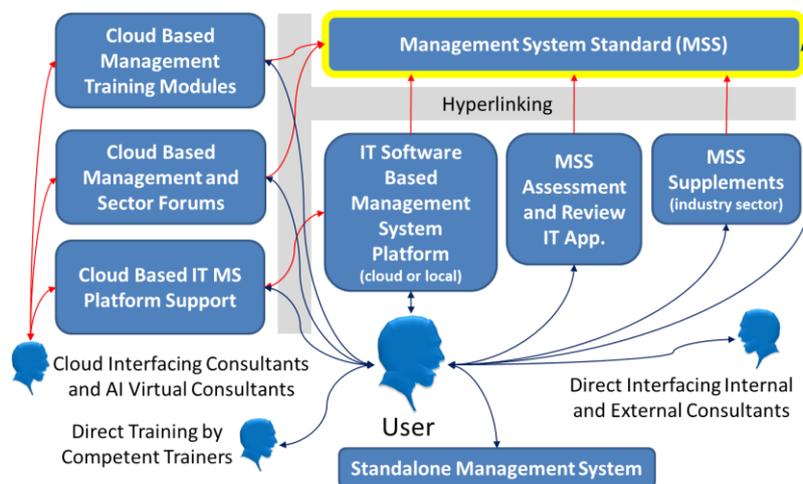


Figure 8: MSS User Interfaces

Support [organisations](#) are free to assist each size and type of [organisation](#) through [creative innovation](#) to fully exploit the [value](#) of this [MSS](#) – refer to [Copyright](#). This may include the development of [IT](#) based [software](#) platforms, [MSS](#)



assessment and [review](#) applications and standards supplements that elaborate the [MSS](#) and provide additional [requirements](#) for industry sectors or specific types of [organisation](#).

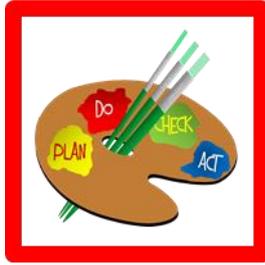
By hyperlinking directly to the [MSS](#) it is not necessary to replicate the contents of the [MSS](#) in an application thereby decreasing the [likelihood](#) of the platform or application becoming misaligned with future revisions of the [MSS](#) i.e. increasing the potential for [future proofing](#) applications.

The [MSS](#) potential interfaces include:

- a) Managers within [organisations](#) developing [management systems](#),
- b) [MSS](#) supplementary standards specific to industry sectors,
- c) Consultants providing support and advice via various channels,
- d) The [organisation's](#) paper or electronically based [management system](#) or a proprietary computer [software](#) based application on a local server,
- e) [MSS](#) assessment and [review](#) applications e.g. [audit](#) applications,
- f) Web based [training](#), [management](#) and sector discussion forums, and support platforms, which may include conventional consultant advice and artificial intelligence.

See also [Appendix 8: Getting started with the MSS](#).

## B. General Requirements



[Management systems](#) shall comply with these general [requirements](#) covering:

- B.1 [Scope of organisation's arrangements](#)
- B.2 [Coherent functionality](#)
- B.3 [Stakeholder specific requirements](#)

Unless the scope of the [management system](#) is limited as per section B.1 [Scope of organisation's arrangements](#), the [requirements defined](#) within this [MSS](#) shall be applied with respect to all facets of the [organisation's performance](#) that impact or may reasonably be expected to potentially [impact](#) its [stakeholders](#). Types of [performance](#) include:

- a) [Quality](#) of internally and externally delivered [goods](#) and [services](#),
- b) Personnel [health, safety](#) and [security](#),
- c) [Environmental health, safety](#) and [security](#),
- d) Physical and virtual [assets health, safety](#) and [security](#),
- e) [Commercial](#) and financial [health, safety](#) and [security](#),
- f) [Commercial responsibility](#), [S]
- g) [Social responsibility](#), [G]
- h) [Stakeholder](#) relations etc. – refer to [Appendix 6: General Aspects of an Organisation](#).

The [organisation](#) shall ensure that its [structures](#) and [processes](#) throughout their [life cycle](#) are:

- i) [Fit](#) for [purpose](#),
- j) Legally compliant,
- k) As far as [practicable](#), are making the best use of [resources](#),
- l) [Commercially responsible](#), [S]
- m) As far as [practicable](#), are [equitably](#) satisfying the [needs](#) and [expectations](#) of [stakeholders](#), [G]
- n) [Socially responsible](#). [G]

### B.1. Scope of organisation's arrangements

∞ The scope of the [organisation's arrangements](#) shall be [defined](#). It shall cover all facets of [performance](#) that the [organisation](#) may potentially directly control and its potential to influence [organisations](#) controlled by others.

The [organisation](#) shall [define](#) its size according to [employee](#) numbers and financial turnover, corresponding to legal definitions prevailing in the part of the world that the [organisation operates](#) , for the [purposes](#) of section A.5.3 [Organisation size automatic clause exemptions](#).

The scope of application of this [MSS](#) shall cover the [management](#) of the whole of the [organisation's strategic, tactical](#) and [operational structures](#) and [processes](#) if it wishes to attain silver or gold [certification](#) status as per section A.5.4 [Certification](#).

The [arrangements required](#) to be compliant with this [MSS](#) shall:

- a) Be appropriate to the significance of the issue being controlled or guided,
- b) Be suitable and sufficient to meet the needs of the [organisation's stakeholders](#),

- c) [Define structure and process ownership](#) and [responsibilities](#),
- d) [Define](#) rules for [process](#) decisions and execution,
- e) State the working language(s) – see section C.4.4.4 [Language](#).

Where this [MSS](#) requires a [schedule](#) to be [created](#), this may be in paper or electronic form and may be stand-alone or part of a [database](#) – refer to section C.4.1 [Management system structure](#).

## B.2. Coherent functionality

∞ To optimise its overall functionality and [continual](#) improvement, the [organisation](#) shall implement the [requirements](#) of this [MSS](#) taking account of the interactions between [requirements](#) and their collective [synergistic impact](#) on the [organisation's structures](#) and [processes](#) as a whole.

Elements of the [management arrangements](#) shall endeavour to:

- a) Support and be compliant with the [purpose](#), [policy](#), [strategy](#) and [objectives](#) of the [organisation](#),
- b) Comply with applicable legislation and adopted standards,
- c) Not conflict with and to harmonize with other elements,
- d) Promote orderliness, simplicity and [transparency](#),
- e) Promote [effectiveness](#), [efficiency](#), [innovation](#), [robustness](#), [agility](#) and [resilience](#),
- f) Promote optimal functioning of [plan-do-check-act management](#) cycles operating throughout the [organisation](#) at every level,
- g) Impose [management control](#) that is appropriate to the potential to [impact stakeholders needs](#) and [expectations](#),
- h) Make the best use of [resources](#).

[Principles](#) listed in section A.6 [Management Principles](#) shall be fully implemented individually and collectively throughout all [aspects](#) of the [management system](#), [as applicable](#). [S]

## B.3. Stakeholder specific requirements

∞ Where a [stakeholder](#) makes [requirements](#) specific to their own [needs](#) and [expectations](#) which are not generally shared by other [stakeholders](#) the [organisation](#) shall [define stakeholder](#) specific [arrangements](#) that are additional to its generic [management arrangements](#). See also sections C.1.1 [Foundation planning](#) and C.4.1 [Management system structure](#).

[Stakeholder](#) specific [arrangements](#) may be [covert](#), as necessary – refer to section A.4 [Covert management arrangements](#).

## B.4. Application of the MSS

∞ Unless the scope of the [management system](#) is restricted as per section B.1 [Scope of organisation's arrangements](#), the [organisation](#) shall apply all applicable [requirements](#) of this [MSS](#) to a degree that adds [value](#) to its functionality.

[Requirements](#) deemed to be not applicable or only partially applicable shall be justified and [recorded](#) in a [schedule](#) or other suitable instrument. Some sizes of [organisation](#) are exempt from specific [MSS](#) clauses – refer to section A.5.3 [Organisation size automatic clause exemptions](#).

## C. Specific Requirements

This main section of the [MSS](#) contains twelve hierarchical subsections corresponding to section E [Specific Requirements Guidance](#). The overall relationship and philosophy of the twelve elements is described in section A.1.3 [Universal PDCA Twelve Element Structure](#).

### C.1. Assessment and Development of Controls



∞ The [organisation](#) shall formally [define arrangements](#) for controlling and guiding the [processes](#) used to develop [prospect and risk controls designed to equitably satisfy stakeholder's needs and expectations](#) using the best use of [resources](#) and shall cover:

- C.1.1 [Foundation planning](#),
- C.1.2 [Strategic plan](#)
- C.1.3 [Policy statement](#),
- C.1.4 [Objectives](#),
- C.1.5 [Legislation and standards](#),
- C.1.6 [Prospect and risk assessment](#),
- C.1.7 [Performance justification](#),
- C.1.8 [Management tools and techniques](#).

Some of the [arrangements](#) may be [covert](#), as necessary – refer to section A.4 [Covert management arrangements](#).

The [organisation](#) shall [review](#) its assessment and development of controls outputs according to section C.12.1 [Review scheduling](#) or when an [event](#) indicates a reason – refer to sections C.10.1.3 [Investigation and analysis of root causes](#) and C.10.2 [External reactive investigation](#).

#### C.1.1. Foundation planning

∞ The [organisation](#) and [significant projects](#) shall [identify, as applicable](#):

- a) The principal [goods](#) and [services](#) that are to be supplied to [customers](#),
- b) The external and internal issues that are relevant to its [purpose](#) and that affect its ability to achieve the intended outcome of its [management system](#),
- c) Its [stakeholders](#) and their principal [needs](#) and [expectations](#) – see also section B.3 [Stakeholder specific requirements](#),
- d) Its [stakeholder behavioural](#) characteristics and potential to influence the [organisation](#), [\[G\]](#)
- e) Its principal internal strengths and weaknesses,
- f) The principal external [opportunities](#) and [threats](#),
- g) Its current or proposed principal [structures](#) and [processes](#) for delivering its [purpose](#) and the key interfaces,
- h) Which [goods](#) and [services](#) are to be sourced externally,
- i) [Significant aspects](#) of its current or proposed [structures](#) and [processes](#) that may [impact](#) facets of [performance](#) relating to [stakeholder needs](#) and [expectations](#) – refer to [Appendix 6: General Aspects of an Organisation](#),
- j) The [need](#) for any [management](#) arrangements to be [covert](#) as per section C.4.1 [Management system structure](#), C.4.2 [Control](#) and C.4.2.10 [Access](#),
- k) The [resources](#) to implement and [maintain](#) the [organisation's management system](#).

[Services](#) and [goods](#) delivered by the [organisation](#) shall:

- l) Be consistent with its legal status – refer to sections C.1.5 [Legislation and standards](#) and C.3.1 [Entity maintenance](#),
- m) Be compliant with adopted standards – refer to section C.1.5 [Legislation and standards](#),
- n) Take account of potential conflicts of interest between [diverse](#) activities and avoid activities that would compromise confidence, impartiality etc. – refer to sections B.1 [Scope of organisation’s arrangements](#) and C.3.1 [Entity maintenance](#).

The [organisation](#), [as appropriate](#), shall engage in [social dialogue](#) with its [stakeholders](#). [\[G\]](#)

The [organisation](#) shall establish and [maintain](#) the following [schedules](#) of [significant data](#) and who is responsible for its [integrity](#) and being kept up to date. It may be in the form of a [database\(s\)](#) – see also sections C.4.1 [Management system structure](#), C.4.2.1 [Databases](#) and C.1.6.2 [Classification of structures and processes](#).

- o) [Management](#) activities conducted on a cyclic basis,
- p) Principal core, supporting and [contingency processes](#) and whether they are repetitive or non-repetitive – see also sections C.7.1.2 [Repetitive and frequently conducted processes](#) and C.7.1.3 [Non-repetitive and infrequently conducted processes](#),
- q) An inventory of significant physical and virtual [assets](#) including:
  - Employed personnel, status and [competency](#) - refer to section C.2.4 [Employment life cycle](#),
  - [Commercial contracts](#) and [customers](#) - refer to section C.3.3 [Contracts](#),
  - [Data](#) types and [management documents](#) - refer to section C.4.1 [Management system structure](#),
  - Matter and energy including [data](#) media - refer to section C.5 [Matter and Energy](#),
  - [Suppliers](#) and status - refer to section C.6 [Suppliers](#),
  - [Normal structures](#) and [normal processes](#) - refer to section C.7 [Normal Structures and Processes](#),
  - [Contingency structures](#) and [processes](#) - refer to section C.8 [Contingency Structures and Processes](#),
  - Change [initiatives](#) and status – refer to section C.9.1 [Change management lifecycle](#),
  - [Reactive investigations](#) - refer to section C.10 [Reactive Investigation](#),
  - [Planned monitoring](#) - refer to section C.11 [Planned Monitoring](#),
  - [Reviews](#) and [actions](#) - refer to section C.12 [Review and Action](#).

A description of the [structure](#) of the [management arrangements](#) for achieving the [organisation’s purpose](#), [vision](#) and [objectives](#) shall be established and [maintained](#) as per section C.4.1 [Management system structure](#).

### C.1.2. Strategic plan

∞ The [organisation](#) shall establish and [maintain](#) a [strategic plan\(s\)](#) that address, [as applicable](#):

- a) Its [purpose](#), [vision](#), [brand](#) and principal [objectives](#),
- b) [Stakeholder needs](#) and [expectations](#),
- c) [Management](#) style, personnel [structure](#) and degree of empowerment,
- d) Delivery of its [goods](#) and/or [services](#),
- e) How [goods](#) and [services](#) are to be sourced externally,
- f) [Commercial](#) profitability and viability,
- g) Markets,

- h) Competition,
- i) Partners and [suppliers](#),
- j) Current and proposed legislation
- k) How [resources](#) such as personnel, [data](#), matter and energy will be suitable and sufficient and used in an optimal way,
- l) An evaluation of the gap between the [organisation's](#) current situation and its [vision](#).

See also section C.9.3 [Strategic change](#).

### C.1.3. Policy statement

∞ The [organisation](#) shall establish and [maintain](#) a [policy statement\(s\)](#) signed by the current [chief executive](#) for the [entity](#) and shall include its [purpose](#), [values](#) and [vision](#), and be appropriate to the [organisation size](#), type and nature of the [organisations](#) activities, [goods](#) and/or [services](#). It shall include a commitment to respect and [equitably](#) satisfy its [stakeholders](#) by:

- a) Being open to and aware of their [needs](#) and [expectations](#),
- b) Making the best use of [resources](#),
- c) Cooperating and coordinating with them,
- d) [Effectively](#) and [efficiently managing](#) the [organisation's structures](#) and [processes](#) wherever they are located or conducted,
- e) Complying with applicable legislation and [contractual arrangements](#),
- f) Providing high [quality goods](#) and [services](#) to [customers](#) on time and within budget,
- g) Minimizing accidents and undesired [events](#), [S]
- h) Maintaining and promoting personnel [health](#), [welfare](#), equal [opportunity](#) and [gender equality](#) [S]
- i) Protecting and improving the [environment](#),
- j) [Commercially responsible](#), just, anti-[bribery](#), anti-corruption and [whistleblowing objectives](#), [structures](#) and [processes](#) – refer to section C.7.1 [Structure and process design](#) , [S]
- k) [Socially responsible objectives](#), [structures](#) and [processes](#), [G]
- l) Honest, simple and clear [communication](#),
- m) Securing [data](#) and respecting [privacy](#),
- n) Defining clear [objectives](#) and allocating appropriate [resources](#),
- o) Optimizing the functionality of [Plan-Do-Check-Act management](#) cycles throughout the [organisation](#) including [strategic](#), [tactical](#) and [operational processes](#) to drive [continual learning](#) and improvement of the [management system](#) and the [organisation performance](#), [S]
- p) Applying [management controls](#) that are appropriate to the significance of the issue,
- q) [Documenting management arrangements](#) to an appropriate extent dependent on the potential to affect [performance](#) and to provide [assurance](#),
- r) Applying change controls that are appropriate to the potential for an ill-conceived modification or experiment to affect the [organisation](#) and its [stakeholders](#), [S]
- s) Requiring personnel directly involved in its [operations](#) to be briefed on and [required](#) to understand the [requirements](#) of [policy statement\(s\)](#) and to comply with all [organisation policies](#), rules and [procedures](#),
- t) Requiring personnel only to report for and remain at work while medically, physically and mentally fit and be free of the influence of alcohol or drugs that may impair their [competence](#), [S]
- u) Encouraging personnel to halt work [processes](#) or take other appropriate [action](#) if there is good reason to believe that there is any [danger](#) to personnel, [assets](#), the [environment](#) or the [quality](#) of [goods](#) or [services](#). [S]

The [policy statement](#) shall be elaborated in sufficient detail and clarity to enable [stakeholders](#) to interpret how the [organisation](#) intends to or may potentially interact with or impact them. [≠μ]

These [values](#) and [principles](#) shall be implemented through; [management leadership](#), the [maintenance](#) of a [management system](#), a positive [organisation culture](#) and a comprehensive [competence base](#). [Organisation culture](#) shall be promoted through [management communication](#), [leadership](#) and ensuring [management system](#) compliance.

[Overt policy statement\(s\)](#) shall be made [available](#) to all [stakeholders](#) and invite their feedback for improvement. [Policy statements](#) needing to be [covert](#) shall be appropriately restricted. [≠μ]

See also section C.9.3 [Strategic change](#).

#### C.1.4. Objectives

∞ [Objectives](#) shall be established for each relevant function and level of the [organisation](#) consistent with the [organisation's strategic plan\(s\)](#), [policy statement\(s\)](#) and potential to [impact stakeholder needs](#) and [expectations](#).

The [organisation](#) shall [define](#) the desired outcome of an [objective](#) and the [process](#) of realizing it.

[Objectives](#) shall where [practicable](#) be [SMART](#) and [define](#):

- a) What will be done,
- b) What [resources](#) will be [required](#),
- c) Who will be [responsible](#) and have [authority](#),
- d) When it will be completed,
- e) How the results will be evaluated.

[Objectives](#) shall be [monitored](#) as per section C.11.1 [Monitoring planning](#) and periodically [reviewed](#) as per section C.12.1 [Review scheduling](#).

#### C.1.5. Legislation and standards

∞ Legislation [significant](#) to the [organisation](#) and other adopted standards shall be identified and taken into account in establishing, implementing and maintaining the [management system](#) – refer to section C.4.1 [Management system structure](#).

Legislation and standards shall be periodically [reviewed](#) as per section C.12.1 [Review scheduling](#) and where relevant following an unexpected [event](#) – refer to section C.10 [Reactive Investigation](#).

The relevant information contained within legislation and adopted standards or an interpretation approved by the [organisation](#) shall be [accessible](#) to those with relevant [responsibilities](#) for achieving compliance – see section C.2.2 [Responsibilities and authorities](#).

An orderly [structured schedule](#) of identified applicable elements of legislation shall be [maintained](#) and aligned with the main [structure](#) of the [management system](#) – refer to section A.1.3 [Universal PDCA Twelve Element Structure](#). [S] [≠μ]

### C.1.6. Prospect and risk assessment

∞ [Strategic](#), [tactical](#) and [operational structures](#) and [processes](#) shall be subjected to an appropriate degree of [prospect and risk assessment](#) using suitable methodologies appropriate to satisfying and not negatively [impacting stakeholder needs](#) and [expectations](#) while making the best use of [resources](#). This also includes the application of established and [creative innovative](#) solutions to address [stakeholder needs](#) and [expectations](#).

The [organisation](#) shall attempt to optimise [management under uncertainty](#) by endeavouring to maximise and minimize individual and aggregates of [prospect and risk](#) respectively. Any individual or aggregate [prospect and risk](#) shall be acceptable according to [pre-defined prospect and risk criteria](#).

Where the [threat](#) is intelligent the [prospect and risk assessment](#) shall be conducted [covertly, as appropriate](#) – refer to section A.4 [Covert management arrangements](#).

[Records](#) of [prospect and risk assessment](#) shall be retained as evidence meeting the [organisation's requirements](#) and the mandatory [requirements](#) of [stakeholders](#) – refer to section C.4.2.9 [Records](#).

#### C.1.6.1. Prospect and risk assessment planning

∞ The [organisation](#) shall [define](#) the philosophical foundation, [criteria](#) and [responsibilities](#) for conducting [prospect and risk assessment processes](#) and the acceptance of assessed [residual prospect and risk](#) and associated [prospect and/or risk controls](#). It shall also [define](#) how it will attempt to optimise interdependent [prospects and/or risks](#) where the [needs](#) and [expectations](#) of [stakeholders](#) appear to potentially conflict and could be [highly significant](#). See also section C.2.5.3 [Management of conflict](#).

[Planning](#) of [prospect and risk assessments](#) shall:

- a) Decide how assessments shall be [managed](#) and who shall be [responsible](#),
- b) Take into account routine and non-routine activities including temporary and permanent modifications and experiments within the [organisation](#) and its [projects](#) or external [projects](#) it may be involved in – refer to section C.9 [Change](#),
- c) Address types of [opportunity](#) and [hazard/harm](#) within the [organisation's environment](#) and outside of it that may [significantly impact](#) the [organisation's objectives](#) or [stakeholders needs](#) and [expectations](#),
- d) Address [strategic, tactical](#) and [operational structures](#) and [processes](#) including [goods](#) and [services](#) identified in the [strategic plan](#) - refer to section C.1.2 [Strategic plan](#),
- e) Address individually and collectively personnel, [commerce, data](#), matter and energy [suppliers](#) and change conducted within and external to the [organisation](#),
- f) Address the lifetime [aspects](#) of [entities](#),
- g) Take account of legislation and [expert](#) advice and assistance which shall be sought as necessary – refer to sections C.1.5 [Legislation and standards](#) and C.2.3 [Provision of expert advice and assistance](#),
- h) Assess and [classify structures](#) and [processes](#) according to type, the potential to [impact stakeholder needs](#) and [expectations](#), and whether they are repetitive or non-repetitive – see also sections C.7.1.2 [Repetitive and frequently conducted processes](#) and C.7.1.3 [Non-repetitive and infrequently conducted processes](#),
- i) [Identify responsibility](#) and [competency](#) for conducting, approving and [reviewing](#) each type of [prospect and risk assessment](#) – refer to section C.2.4.4 [Competence](#),
- j) [Identify](#) the [need](#) for general and specialist [prospect and risk assessments](#),

- k) [Identify](#) and justify modelling and [analytical](#) methodologies to be used in [prospect and risk assessments](#) – refer to section C.1.8 [Management tools and techniques](#),
- l) [Identify](#) if [prospect and risk assessment processes](#) and outputs or any other [aspect](#) needs to be [covert](#) – refer to section A.4 [Covert management arrangements](#),
- m) Define [criteria](#) for confirming that assessed [residual prospect and risk](#) and associated [prospect and risk controls](#) are acceptable including the provision of sufficient [redundancy](#) and [diversity](#) to ensure the [required](#) continuity of the [organisation's](#) functionality and [availability](#) to deliver its [purpose](#). This should be done while endeavouring to make the [organisation's structures](#) and [processes lean](#).

Where an [organisation](#) identifies an [aspect](#) with a potential external [impact](#) it shall be treated as a collective [impact](#) of the summation of all similar [behaviours](#) within relevant [organisations](#) acting as a whole.

NOTE: Addressing [life cycle aspects](#) does not require a detailed [life cycle](#) assessment. It implies that the focus extends over the [life cycle](#) addressing all [aspects](#) that are [significant](#).

### C.1.6.2. Classification of structures and processes

∞ The [organisation](#) shall define and implement [arrangements](#) for [classifying](#) physical and non-physical [structures](#) and [processes](#) according to their potential to [impact](#) perceived [stakeholder needs](#) and [expectations](#), and their [need](#) to be [managed covertly](#) or [confidentially](#), with respect to: [\[≠μ\]](#)

- a) Personnel,
- b) [Commerce](#),
- c) [Data](#),
- d) Matter and energy including [data](#) media,
- e) [Suppliers](#) – refer to section C.6.1 [Classification, vetting and control](#),
- f) [Normal structures](#) and [normal processes](#),
- g) [Contingency structures](#) and [contingency processes](#),
- h) Change,
- i) [Reactive investigation](#),
- j) [Planned monitoring](#),
- k) [Review](#) and [action](#).

The [organisation](#) shall [classify](#) its [structures](#) and [processes](#) according to defined [arrangements](#). [\[≠μ\]](#)

### C.1.6.3. Aspect and impact identification

∞ Subject to the [classification requirements](#) defined according to section C.1.6.2 [Classification of structures and processes](#), each part of the [organisation's](#) overall [structures](#) and [processes](#) including [workplaces](#) and [significant projects](#) shall be subjected to general [prospect and risk identification](#) using an appropriate methodology and [recorded](#) that includes, [as applicable](#):

- a) [Identification](#) of [aspects](#) of [structures](#) and [processes](#) that may potentially [significantly impact stakeholder needs](#) and [expectations](#) – refer to [Appendix 6: General Aspects of an Organisation](#),
- b) [Identification](#) of [opportunities](#) to satisfy [customer](#) and other [stakeholder needs](#) and [expectations](#),
- c) [Identification](#) of potential sources of [harm impacting stakeholder needs](#) and [expectations](#) and who will be affected.

The [need](#) for specialist [prospect and risk assessments](#) shall be identified during the general [prospect and risk assessments](#) and conducted as necessary.

#### **C.1.6.4. Prospect and risk analysis and synthesis**

∞ Subject to the [classification requirements](#) defined according to section C.1.6.2 [Classification of structures and processes](#), identified [prospects and risks](#) shall be subjected to an appropriate degree of [prospect and risk analysis and synthesis](#):

- a) Assuming that existing [prospect and risk controls](#) are [ineffective](#),
- b) Using appropriate methodologies,
- c) Attempting to [equitably](#) optimise stakeholder [needs](#) and [expectations](#) while making the best use of [resources](#),
- d) Addressing, [as applicable](#), the ‘what, how, where, who, when and why’ related to sources of potential [prospect and risk](#),
- e) Using numerical and/or qualitative estimation, [as appropriate](#),

#### **C.1.6.5. Prospect and risk improvement**

∞ Subject to the [classification requirements](#) defined according to section C.1.6.2 [Classification of structures and processes](#) and criteria defined as per section C.1.6.1 [Prospect and risk assessment planning](#), define [prospect and risk controls](#). This should include [structure](#) and/or [process](#) change proposals and development of [contingency arrangements as appropriate](#), so that, [as appropriate](#), [prospect and/or risk improvement](#) is achieved via avoidance, transfer or control to acceptable levels compliant with defined [prospect and risk criteria](#) as per section C.1.6.1 [Prospect and risk assessment planning](#).

Sufficient [redundancy](#), [diversity](#) and [segregation](#) shall be implemented to ensure the [required](#) continuity of the [organisation’s](#) functionality and its [availability](#) to deliver its [purpose](#). This should be done while endeavouring to make the [organisation’s structures](#) and [processes lean](#).

#### **C.1.6.6. Prospect and risk improvements analysis and synthesis**

∞ Subject to the [classification requirements](#) defined according to section C.1.6.2 [Classification of structures and processes](#), where it has been proposed to modify a [structure](#) and/or [process](#), to achieve [prospect and/or risk improvement](#), the [prospect and/or risk](#) of the relevant [aspects](#) shall be re-subjected to the requirements of section: C.1.6.4 [Prospect and risk analysis and synthesis](#).

#### **C.1.6.7. Prospect and risk assessment review**

∞ Subject to the [classification requirements](#) defined according to section C.1.6.2 [Classification of structures and processes](#), [prospect and risk assessments](#) shall be [reviewed](#) prior to approval according to section C.1.6.8 [Residual prospect, risk and controls acceptance](#) against [prospect and risk criteria defined](#) as per section C.1.6.1 [Prospect and risk assessment planning](#). An independent [peer review](#) shall be conducted where [significant](#) potential [prospect and risk](#) is being managed or where it is a [stakeholder requirement](#).

[Prospect and risk assessments](#) shall be periodically [reviewed](#) or when the assessment inputs change. The periodicity shall be [defined](#) – see also section C.1.1 [Foundation planning](#).

Where [risk](#) assessment templates are [maintained](#) for regularly performed tasks, they shall be [reviewed](#) against current [conditions](#) and modified [as appropriate](#) according to section C.9 [Change](#).

#### **C.1.6.8. Residual prospect, risk and controls acceptance**

∞ Subject to the [classification requirements](#) defined according to section C.1.6.2 [Classification of structures and processes](#), the [residual prospects and risks](#) and their respective [controls](#) shall be accepted and approved by the designated [responsible](#) person.

#### **C.1.7. Performance justification**

∞ Where [required](#) by [stakeholders](#), formal [performance](#) justifications shall be established and [maintained](#) according to [arrangements](#) agreed with the relevant stakeholder(s). These [arrangements](#) shall confirm an appropriate degree of [validation](#) and [verification](#) has been applied to provide the level of confidence [required](#) by relevant [stakeholders](#).

[Performance](#) justifications shall be subject to a level of [peer review](#) commensurate with the associated [risks](#). [S]

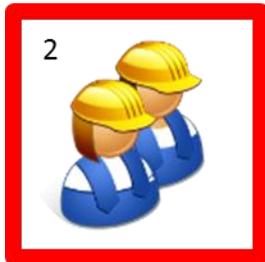
The [organisation](#) shall not conduct [operations](#) outside of the justification's scope where this will violate legitimate [stakeholder requirements](#).

#### **C.1.8. Management tools and techniques**

∞ The use of [management tools](#) and techniques to optimise or improve or assist the functionality [structures](#) and [processes](#) by the [organisation](#) or by a [supplier](#) on its behalf shall be [defined](#) or the source(s) of the methodologies referenced.

The circumstances of use, any limitations and the confidence that may be placed in the outputs shall be stated.

## C.2. Personnel



2

∞ The [organisation](#) shall formally [define arrangements](#) for controlling and guiding the [management](#) of personnel under its control including:

**Error! Reference source not found.** [Organisation](#),

C.2.2 [Responsibilities and authorities](#),

C.2.3 [Provision of expert advice and assistance](#),

C.2.4 [Employment life cycle](#),

C.2.5 [Interactions](#).

The [organisation](#) shall ensure that personnel [management](#) is compliant with its [policy](#), [strategic plan](#), [objectives](#) and legislation – refer to sections C.1 [Assessment and Development of Controls](#).

Some of the [arrangements](#) may be [covert](#), as necessary – refer to section A.4 [Covert management arrangements](#).

### C.2.1. Organisation

∞ The [chief executive](#) of the [organisation](#) shall establish a personnel [structure](#) that is suitable and sufficient to deliver its [purpose](#).

The [organisation](#) shall ensure that personnel [resources](#) are adequate to implement and [maintain](#) the [strategic plan](#), [policy](#), [objectives](#), [management system](#), [normal processes](#), [contingency processes](#), change [processes](#) and the [management](#) of [projects](#) covered in section C.1 [Assessment and Development of Controls](#).

The [organisation](#) shall establish suitable and sufficient cross functional groups, as necessary, to support its [objectives](#) and the on-going [management](#) of its [management system](#). These groups shall contain or have [access](#) to suitable and sufficient [expert](#) advice – refer to section C.2.3 [Provision of expert advice and assistance](#). [≠μ]

The [organisation](#) and [project](#) personnel [structures](#) shall be [defined](#) and include the [organisation's](#) principal directly employed personnel and principal [contracted](#) personnel from partnering and/or [supplier organisations, as applicable](#).

#### C.2.1.1. Remote working

∞ The [organisation](#) shall ensure that the working of personnel remotely from the main [organisation](#), on a temporary or permanent basis:

- a) Is subjected to a suitable and sufficient [prospect and risk assessment](#) that addresses the potential [significant impacts](#) on all [stakeholder needs](#) and [expectations](#) as per section C.1.6 [Prospect and risk assessment](#),
- b) Is appropriately controlled, to equitably balance the needs of stakeholders,
- c) Meets legal and contractual obligations –as per sections C.1.5 [Legislation and standards](#) and C.3.3 [Contracts](#),
- d) Is appropriately monitored as per section C.11 [Planned Monitoring](#).

## C.2.2. Responsibilities and authorities

∞ The [organisation](#) shall establish and maintain a code-of-conduct that all personnel working under its control shall be [required](#) to comply with whenever working on behalf of the [organisation](#). The code-of-conduct shall define personal behaviour compliant with the [organisation's](#) policy statement required by section C.1.3 [Policy statement](#).

The [organisation](#) shall establish and [maintain job descriptions](#) for all [defined](#) personnel [posts](#) and [roles](#) sufficient for recruitment and [monitoring performance](#). The [job description](#) shall directly or via cross reference include:

- a) Job title,
- b) [Purpose](#) of the [organisation post](#) or [role](#),
- c) Place in [organisation](#) and lines of reporting,
- d) [Duties](#),
- e) [Authority](#),
- f) [Accountability](#),
- g) [Competence](#).

[Responsibilities](#) and [authorities](#) shall take account of [prospect and risk assessments](#) and limit the [authority](#) to make decisions [as appropriate](#) – refer to section C.1.6 [Prospect and risk assessment](#).

[Duties](#) shall be sufficiently [segregated](#) to ensure that there are no conflicts of interest.

[Defined posts](#) and [roles](#) shall, [as appropriate](#), cover [responsibility](#) for:

- h) Making [strategic](#), [tactical](#) and [operational](#) decisions,
- i) Establishing, implementing and maintaining a [management system](#) in accordance with the [requirements](#) of this and other applicable standards and applicable legislation, and acting as the focal point and reporting on its [performance](#) to [top management](#). This [role](#) is referred to as the [management system representative](#),
- j) One or more principal [structures](#) and/or [processes](#) and ensure all [aspects](#) comply with relevant parts of this standard – refer to sections C.1.1 [Foundation planning](#) and C.7.1 [Structure and process design](#),
- k) Establishing and [maintaining](#) inventories of physical and nonphysical [assets](#) – refer to section C.1.1 [Foundation planning](#),
- l) Approving [competence requirements](#),
- m) Approving personnel appointment and confirming [competence](#),
- n) The [management](#) and/or conduct of [contingency processes](#) – refer to section C.8 [Contingency Structures and Processes](#),
- o) The [management](#) and/or conduct of [reactive investigation](#) – refer to section C.10 [Reactive investigation](#),
- p) The [management](#) and/or conduct of [planned monitoring](#) – refer to section C.11 [Planned monitoring](#),
- q) Establishing and operating [review processes](#) – refer to section C.12 [Review and Action](#).

Personnel [duties](#) shall be [documented](#) and formally acknowledged.

Personnel shall be [required](#) to:

- r) Comply with the [management system](#) and where appropriate engage in its development and improvement,
- s) [Cooperate](#) with other [workers](#) and [stakeholders](#),
- t) [Coordinate](#) individuals and [organisations](#) where empowered,
- u) To be vigilant and self-monitor as per section C.11.7 [Self-monitoring and vigilance](#) and stop work and consult where there is [significant](#) cause to believe that [processes](#) are deviating from agreed [objectives](#) or [requirements](#) or are negatively [impacting stakeholder requirements](#) – see also section C.2.5.3 [Management of conflict](#),
- v) Not to engage in or assign another to any activity for which they are not [competent](#), unless adequately supervised, or violates the [management system](#),
- w) Not to engage in or encourage or cause others to engage in [bribery](#), corruption or [commercially irresponsible actions](#) or [behaviours](#) and to report such suspected or actual undesired [events](#) – see also section C.11.7 [Self-monitoring and vigilance](#), [S]
- x) Not to initiate or participate in [socially irresponsible actions](#), [G]
- y) Comply with the [principles](#) of [confidentiality](#) and not disclose information to those unauthorised to receive it,
- z) Show respect to [stakeholders](#),
- z) Report the [organisation](#) to a [responsible](#) body if it acts illegally and the matter is not capable of being readily resolved internally – see also sections C.2.5.3 [Management of conflict](#) and C.2.5.2.3 [Whistleblowing](#),
- aa) Report the [organisation](#) to a [responsible](#) body if it acts in a [commercially irresponsibly](#) way and the matter is not capable of being readily resolved internally – see also sections C.2.5.3 [Management of conflict](#) and C.2.5.2.3 [Whistleblowing](#). [S]

Personnel shall be empowered to a degree that optimises the functionality of the [organisation](#) and [authority](#) shall be formally defined for specifying, procuring, installing, [accessing](#), [operating](#), [maintaining](#) and changing [structures](#) and [processes](#) including [infrastructure](#) and [data](#).

[Responsibilities](#) and [authority](#) shall be formally terminated on leaving the [organisation](#) or [project](#) as per section C.2.4.9 [Leaving](#).

Where appropriate, the [responsibility](#) and [authority](#) for [covert arrangements](#) shall be [defined](#).

### C.2.3. Provision of expert advice and assistance

∞ The [organisation](#) shall [define](#) its needs for [expert](#) advice and [maintain](#) a [schedule](#) of how these needs are being fulfilled internally or externally to the [organisation](#).

The [organisation](#) shall [maintain expert committee](#) and [organisation](#) structure(s), as necessary and specifically [required](#) by [stakeholders](#), to administer [expert](#) advice and [reviews](#) – refer to sections **Error! Reference source not found.** [Organisation](#) and C.2.2 [Responsibilities and authorities](#).

The [organisation](#) shall engage additional [expert](#) advice and support when the [need](#) is identified – refer to sections C.1.6 [Prospect and risk assessment](#) and C.10.1.3 [Investigation and analysis of root causes](#).

The [arrangements](#) shall meet the [requirements](#) of sections C.2.4.4 [Competence](#), C.3.2 [Stakeholders](#) and C.6 [Suppliers](#), [as applicable](#).

## C.2.4. Employment life cycle

∞ The [organisation](#) shall establish and [maintain](#) formal [arrangements](#) for [managing](#) the employment lifecycle of personnel under its control from recruitment to leaving and [records](#) retained.

[Employees](#) over their employment lifecycle shall be formally issued with suitable and sufficient controlled [documents](#) as per section C.4.2.2 [Internal documents](#) to fulfil their [duties](#) and [authority](#) covered in section C.2.2 [Responsibilities and authorities](#). The [documents](#) shall be repossessed when the [employee](#) leaves the [organisation](#) as per section C.2.4.9 [Leaving](#).

Personnel [data](#) shall be [managed](#) as per section C.4.2.9 [Records](#) and restricted as per section C.4.2.10 [Access](#).

### C.2.4.1. Recruitment

∞ The [organisation](#) shall:

- a) Ensure that a [job description](#) accurately [defines](#) the [requirement](#) of a [post](#) or [role](#) and is legally compliant prior to initiating recruitment to an [organisation](#) or [project](#),
- b) Establish and [maintain](#) a standard application form(s) to collect the applicants key [data](#) sufficient for the [creation](#) of short listing candidates for interviewing,
- c) Job advertisements shall accurately reflect the [job description](#) and not unfairly discriminate or otherwise violate the [organisation's](#) [policy statement](#),
- d) Subject interviewees to the same set of interview questions for a given [post](#) or [role](#), and retain [records](#) of their [performance](#) and conclusions leading to recruitment decisions,
- e) Take up references and [verify](#) that qualifications are true,
- f) Conduct a level of [due diligence](#) informed by the [prospect and risk](#) associated with the [post](#) or [role](#),
- g) Conduct medicals and drug and alcohol [testing](#) to meet job [requirements](#).

### C.2.4.2. Induction

∞ Personnel new to the [organisation](#), a [project](#), [post](#) or [role](#) shall be appropriately supervised until they receive an appropriate induction(s) by a [responsible](#) and [competent](#) person(s).

Induction briefings shall be in a language understandable to the inductee and be appropriately [structured](#), relevant to the inductee [post](#) or [role](#) and cover, [as applicable](#):

- a) Location [emergency](#) rules and [welfare arrangements](#),
- b) Introduction to personnel that the person will interact with,
- c) Terms of employment and code-of-conduct as per section C.2.2 [Responsibilities and authorities](#),
- d) [Job description](#),
- e) Introduction to the [organisation's purpose](#) and principal [operations](#),
- f) Introduction to the [policy\(s\)](#),
- g) [Good/service quality](#), [health](#) and [safety](#) and [environmental principles](#) awareness,
- h) [Security principles](#) awareness including clean desk policy, where applicable,
- i) [Commercial responsibility](#) principles awareness, [\[S\]](#)
- j) [Social responsibility](#) principles awareness, [\[G\]](#)
- k) Introduction to the [management system](#), the importance of compliance and what to do if there are difficulties or on making suggestions for improvement,
- l) Conflict resolution, disciplinary, grievance and [whistleblowing arrangements](#),

- m) Awareness of the principal [prospects and risks](#) associated with their [workplace](#) related to [structures](#) and [processes](#) and how they are controlled.

#### C.2.4.3. Appointment

∞ A [schedule](#) shall be [maintained](#) showing current personnel appointments to [posts](#) and [roles](#) and those able to deputise fully or supervised corresponding to the [competence schedule](#) developed under section C.2.2 [Responsibilities and authorities](#).

[Contracts](#) of employment shall be established, issued and implemented, including terms and [conditions](#) for appointees compliant with C.3.3 [Contracts](#).

#### C.2.4.4. Competence

∞ The [organisation](#) shall:

- a) Establish and [maintain](#) a [schedule](#) of [competencies](#) that are judged to be either essential or desirable to support the [organisation](#) and [project processes](#) and also providing [expert](#) advice and assistance as per section C.2.3 [Provision of expert advice and assistance](#),
- b) Take account of any [classification](#) of [structures](#) and [processes](#) – refer to section C.1.6.1 [Prospect and risk assessment planning](#),
- c) [Maintain](#) sufficient [competent](#) personnel to [operate](#) the [organisation's](#) normal and [contingency](#) processes including [strategic](#), [tactical](#) and [operational processes](#) compliant with the [competence schedule](#),
- d) Establish and [maintain](#) a [competence records database](#) – refer to section C.4.2.1 [Databases](#), [\[≠U\]](#)
- e) Only assign personnel to tasks for which they are [competent](#) or otherwise appropriately supervised.

The following minimum levels of [competences](#) shall be included in the [competence schedule](#):

- f) [Stakeholder needs](#) and [expectations](#) awareness,
- g) [Organisation policy](#) awareness,
- h) [Good](#) and [service quality](#) awareness,
- i) [Commercial awareness](#),
- j) [Commercial responsibility](#) awareness, [\[S\]](#)
- k) [Social responsibility](#) awareness, [\[G\]](#)
- l) Personnel [health, safety](#) and [welfare](#) awareness,
- m) [Environmental](#) awareness,
- n) [Management system](#) awareness,
- o) Principal [prospects and risks](#) awareness including those [likely](#) to be encountered when visiting premises or sites not under the direct control of the [organisation](#),
- p) [Prospect and risk assessment](#),
- q) Use of and interaction with the [organisation's](#) general support systems including [IT](#),
- r) Bronze level [internal auditor](#) (bronze level issues),
- s) Silver level [internal auditor](#) (bronze and silver level issues). [\[S\]](#)
- t) Gold level [internal auditor](#) (bronze, silver and gold level issues). [\[G\]](#)

Where the [organisation's](#) [services](#) involve the care of people relevant personnel shall have core [competencies](#) that include compassion and empathy personal attributes.

##### C.2.4.4.1. Competence, education and training needs

∞ The [organisation](#) shall

- a) From the conduct of periodic personnel appraisals, as per section C.2.4.4.2 [Competence development and assessment](#), [determine](#) personnel [competence](#) development, [education](#) and [training requirements](#) based on relevant:
  - [Job descriptions](#),
  - [Schedule](#) of identified [competences](#) established under section C.2.2 [Responsibilities and authorities](#),
  - [Strategy](#) established under section C.1.2 [Strategic plan objectives](#) established under section C.1.4 [Objectives](#) and [management review](#) outputs produced according to section C.12.3 [Review output and action](#),
- b) [Maintain](#) a [‘training needs’ program](#).

#### **C.2.4.4.2. Competence development and assessment**

∞ The [organisation](#) shall:

- a) [Continually monitor](#) and [review](#) personnel [performance](#) and conduct periodic personnel appraisals including:
  - Compliance with [job description](#) and other relevant [requirements](#) as per section C.2.2 [Responsibilities and authorities](#),
  - Setting and implementation of personal [objectives](#),
  - [Maintenance](#) of mental, physical and medical [fitness](#) as per section C.2.4.4.4 [Fitness](#),
  - [Events](#) involving [human error](#) or [human violation](#) possibly needing implementation of disciplinary processes as per section C.2.4.8 [Discipline](#),Refer also to sections C.11.2 [Internal audit](#), C.11.5 [Inspection](#), C.12.1 [Review scheduling](#) and section C.6.4 [Performance evaluation](#).
- b) [Identify](#) and engage approved external [training](#) providers as per section C.6 [Suppliers](#) or develop [services](#) internally ensuring that [trainers](#) and assessors are [competent](#) as per section C.2.4.4 [Competence](#),
- c) Retain copies of [training](#) and [competency documents](#) and authenticate as true copies where appropriate as per section C.4.2.9 [Records](#),
- d) Actively support the [continual](#) personal development ([CPD](#)) of its staff necessary to [maintain](#) their professional [competence](#).

#### **C.2.4.4.3. Education and training programs evaluation**

∞ The [organisation](#) shall [monitor education](#) and [training programs](#) to ensure that they are fit for [purpose](#) and to support [continual](#) improvement.

#### **C.2.4.4.4. Fitness**

∞ The [organisation](#) shall:

- a) Ensure personnel complete a self-[certification](#) medical [form](#) at least annually within the constraints of any applicable legislation,
- b) [Identify](#) special classes of personnel requiring a special [risk assessment](#) of the [workplace](#) to [define](#) limitations and make special provisions, as necessary that may include establishing appropriate conventions as per section C.4.4 [Conventions](#),
- c) [Monitor](#) special classes of person to ensure the [workplace](#) does not cause them any problems,
- d) Ensure any [significant fitness](#) limitations are [communicated](#) to relevant line manager(s),

- e) Assign personnel to work patterns that ensure that fatigue does not impair their [fitness](#) for the type of work being carried out,
- f) Be open to personnel reporting [stress](#) or [welfare](#) or other problems or behaving unusually,
- g) Allow personnel leave for reasonable compassionate circumstances,
- h) Subject personnel to [for-cause](#) alcohol and drug [testing](#) when their [behaviour](#) gives cause for concern when part of the [organisation's policy](#),
- i) Only assign personnel to tasks for which they are physically, mentally and medically fit or ensure a suitable level of supervision if this is [practicable](#).

#### C.2.4.5. Welfare

∞ The [organisation](#) shall establish and [maintain](#) suitable and sufficient [welfare arrangements](#) for the personnel under its control appropriate to their [fitness](#) – refer to section C.2.4.4.4 [Fitness](#).

#### C.2.4.6. Work absence and rehabilitation

∞ Managers shall:

- a) Interview personnel returning from absence due to [significant](#) sickness or injury,
- b) Agree a [program](#) of rehabilitation,
- c) Monitor the rehabilitation [program](#).

#### C.2.4.7. Post or role change

∞ Personnel undergoing a [post](#) or [role](#) change shall be treated to the same [processes, as applicable](#), as a new external appointment covered in section C.2.4.1 [Recruitment](#).

The changing of the [post](#) or [role definition](#) shall be controlled as per section C.9.4 [Structure and process change](#) and C.9.5 [Project change, as applicable](#).

#### C.2.4.8. Discipline

∞ The organisation shall:

- a) [Maintain](#) a disciplinary [process](#) meeting legal [requirements](#),
- b) [Record](#) reported or [observed violations](#) of the [organisation's policy](#) or [management system](#) and [investigate](#) them – refer to section 0 [Reactive investigation](#),
- c) [Maintain confidentiality](#) as per section C.4.2.10 [Access](#),
- d) Interview person(s) suspected of committing [violations](#) and if confirmed proceed with disciplinary [processes](#).

#### C.2.4.9. Leaving

∞ When personnel leave the [organisation](#) or [project](#) due to resignation, retirement, dismissal or death while in [service](#) the [organisation](#) shall before final payment is made to the leaver and where [practicable](#):

- a) Interview the leaver to:
  - minimise potential negative impacts on [organisation](#) performance,
  - determine and record the reason(s) for leaving,
  - capture potentially valuable feedback to aid continual improvement,
- b) Ensure all [organisation assets](#) are returned,
- c) Ensure [access](#) is terminated to [infrastructure](#) and [data](#),
- d) A leaving [record](#) is generated and signed by the [organisation's](#) representative and the leaver,

- e) The [organisation's databases](#) are updated as per section C.4.2.1 [Databases](#).

If requested, the [organisation](#), at its discretion, shall provide a factual reference for the person leaving.

## C.2.5. Personnel Interactions

∞ The [organisation](#) shall establish and [maintain efficient](#) and [effective](#) interactions covering:

- C.2.5.1 [Interfaces](#),
- C.2.5.2 [Communication, consultation, participation and reporting](#),
- C.2.5.3 [Management of conflict](#).

### C.2.5.1. Interfaces

∞ When the [need](#) is identified, organisation(s) shall [define](#) formal [arrangements](#) for:

- a) Interacting with other [organisations](#),
- b) Interactions between internal [organisations](#).

### C.2.5.2. Communication, consultation, participation and reporting

∞ [Communication](#), consultation, participation and reporting [arrangements](#) shall be [transparent](#), appropriate, credible, clear and reliable, and cover:

- C.2.5.2.1 [Internal communication, consultation, participation and reporting](#),
- C.2.5.2.2 [External communication, consultation, participation and reporting](#).

[Communication](#), consultation, participation and reporting [arrangements](#) shall address:

- a) What, when, how and to whom to [communicate](#), consult, facilitate participation and report,
- b) [Responsibilities](#) and [authorities](#) – refer to C.2.2 [Responsibilities and authorities](#).
- c) [Prospect and risk](#) – refer to C.1.6 [Prospect and risk assessment](#),
- d) Interaction with existing and potential [customers](#) and other [stakeholders](#) covering:
  - [Goods](#) and [services](#) information – refer to section C.3.2 [Marketing](#),
  - Enquiries, [contracts](#) or order handling, including amendments – refer to section C.3.3 [Contracts](#),
  - [Stakeholder](#) feedback, including complaints – refer to sections 0 [Planned monitoring](#) and 0 [Reactive investigation – Events](#),
  - Handling of [stakeholder assets](#), if applicable – refer to section C.3.3 [Contracts](#),
  - Specific [requirements](#) for [contingency actions](#), where relevant – refer to section 0 [Contingencies](#),
- e) [Confidentiality](#) – refer to sections C.2.2 [Responsibilities and authorities](#) and C.4.2.10 [Access](#) ,
- f) Reputation of the [organisation](#) and its [stakeholders](#),
- g) [Conventions](#) as per section C.4.4 [Conventions](#),
- h) Accuracy and error [correction](#) – see also C.9.2 [Corrective and preventive action](#) and 0 [Contingencies](#),
- i) Reporting of [data](#) relating to the [organisation](#) – refer to C.4.3.2 [Indicators](#).
- j) Reporting [actions](#) following suspected or actual serious institutional or individual negligence, neglect or illegality, breaches of [security](#) – see also sections 0 [Reactive investigation – Events](#) and **Error! Reference source not found.** [Whistleblowing](#).

Classes of information that should not be disclosed to [unauthorized](#) persons and how it is to be [managed](#) shall be [defined](#). See also section C.2.2 [Responsibilities and authorities](#) and C.4.2.10 [Access to data](#).

[Communication](#) restrictions shall not unfairly [impact](#) the legitimate [needs](#) and [expectations](#) of [stakeholders](#).

The [organisation](#), [as appropriate](#), shall engage in [social dialogue](#) with its [stakeholders](#) and within its [sphere of influence](#) promote [social responsibility](#). [G]

[Significant communication failures](#) shall be treated as [events](#) as per section 0 [Reactive investigation](#) and [corrective action](#) and [preventive action](#) taken as per section C.9.2 [Corrective and preventive action](#).

The [organisation](#) shall retain [records](#) as evidence of its [communications](#) as per section C.4.2.9 [Records](#).

#### **C.2.5.2.1. Internal communication, participation and consultation**

∞ The [organisation](#) shall [define](#) and implement formal bi-directional channels of [communication](#).

The [organisation](#) shall consult relevant internal [stakeholders](#) where proposed changes may [significantly impact](#) them.

[As appropriate](#), the [organisation](#) shall involve personnel in:

- a) [Prospect and risk assessments](#),
- b) Undesired [events investigation](#),
- c) [Significant organizational](#) change,
- d) Development and [review](#) of policies and [objectives](#).

The [organisation](#) shall implement aids to enhance [communication](#) in addition to that [required](#) by legislation. [S]

#### **C.2.5.2.2. External communication, consultation, participation and reporting**

∞ The [organisation](#) shall:

- a) [Maintain](#) contact details with all key [organisations](#) that it deals with,
- b) Report all relevant accidents and undesired [events](#) to regulatory bodies and other relevant [stakeholders](#) without undue delay and immediately where the body has [contingency arrangements](#) or other means to achieve [risk mitigation](#) – see also C.8.2.4 [Defect notification and recall](#),
- c) Consult external [stakeholders](#) and facilitate participation, [as appropriate](#), where [significant](#) changes may potentially [impact](#) their [needs](#) and [expectations](#),
- d) Ensure all [marketing communication data](#) complies with section 0 [Data](#),
- e) Ensure that [communications](#) are [covert](#) where it is necessary to [safeguard](#) the legitimate [needs](#) and [expectations](#) of [stakeholders](#) and comply with section C.4.2.10 [Access](#).
- f) At least annually publically publish [performance data](#) covering:
  - [Health](#) and [safety performance](#),
  - [Environmental performance](#),
  - [Commercial performance](#),
  - [Commercially responsibility performance](#), [S]
  - [Social responsibility performance](#), [G]

The [organisation](#) shall designate staff who are authorised to [communicate](#) with external bodies and the media – refer to section C.2.2 [Responsibilities and authorities](#).

See also section C.3.2 [Marketing](#).

### C.2.5.2.3. Whistleblowing

∞ The [organisation](#) shall [define whistleblowing arrangements](#) that include:

- a) The legal rights of personnel to [whistleblow](#) – refer to section C.1.5 [Legislation and standards](#),
- b) [Duty](#) of personnel to whistleblow as per section **Error! Reference source not found.** [HYPERLINK \l "\\_Whistle\\_blowing"Whistleblowing](#),
- c) Internal independent persons that may be contacted,
- d) External independent bodies that can be contacted,
- e) Scope of [whistleblowing](#),
- f) How [confidentiality](#) will be [maintained](#),
- g) A commitment that personnel will not be disciplined or any other adverse [action](#) taken against them for responsibly [whistleblowing](#),
- h) [Communication](#) of the [whistleblowing arrangements](#) to the [organisation's](#) relevant internal [stakeholders](#) as per section C.2.5.2.1 [Internal communication, consultation, participation and reporting](#),
- i) [Communication](#) of the [whistleblowing arrangements](#) to the [organisation's](#) relevant external [stakeholders](#) as per section C.2.5.2.2 [External communication, consultation, participation and reporting](#). [S]
- j) [Maintenance](#) of an approved independent [supplier](#), irrespective of national legislation, providing [whistleblowing services](#) – refer to section 0 [Suppliers](#). [S]

### C.2.5.3. Management of conflict

∞ The [organisation](#) shall endeavour to minimize the potential for [significant](#) and [highly significant](#) conflict by ensuring:

- a) Awareness of [stakeholders needs](#) and [expectations](#) and [effectively](#) and [efficiently](#) interacting with them – refer to sections C.1.1 [Foundation planning](#) and C.2.5 [Interactions](#).
- b) [Structures](#) and [processes](#) are properly [planned](#), [designed](#) and implemented based on or informed by [prospect and risk assessments, as applicable](#) – refer to section **Error! Reference source not found.** [Prospect and risk assessment planning](#), 0 [Normal Structures and Processes](#) and 0 [Contingency Structures and Processes](#).
- c) All personnel under its control are aware that they have a right and [duty](#) not to perform work if there is any [significant](#) or [highly significant](#) issue relating to [health](#), [safety](#), [environment](#) or [good/service quality](#) and that disciplinary [action](#) will not follow because of reasonably exercising this right. See also sections C.2.2 [Responsibilities and authorities](#) and C.2.4.2 [Induction](#).

The [organisation](#) shall establish and [maintain](#) formal [arrangements](#) for [managing](#) situations where personnel stop work when they have legitimate concerns and other potential conflicts arising in the [workplace](#). The [responsible](#) manager shall consult [expert](#) advice, as necessary, and only allow work to recommence when there is sufficient confidence that it is reasonable to do so. See also sections C.8.2.3 [Intentionally halted processes](#) and **Error! Reference source not found.** [Whistleblowing](#).

Where [significant violations](#) of the [management system](#) or other mandatory [requirements](#) by employed personnel the [organisation](#) shall take disciplinary [action](#) as per section C.2.4.8 [Discipline](#).

## C.3. Commerce



∞ The [organisation](#) shall formally [define arrangements](#) for controlling and guiding the [management](#) of [commerce](#) including:

- C.3.1 [Entity maintenance](#),
- C.3.2 [Marketing](#),
- C.3.3 [Contracts](#),
- C.3.4 [Finance](#).

The [organisation](#) shall ensure that [commercial management](#) is compliant with its [policy](#), [strategic plan](#), [objectives](#) and legislation – refer to sections C.1 [Assessment and Development of Controls](#).

Some of the [arrangements](#) may be [covert](#), as necessary – refer to section A.4 [Covert management arrangements](#).

[Structures](#) and [processes](#) shall be [validated](#) as per section C.1.7 [Performance justification](#), where [required](#) by [stakeholders](#).

### C.3.1. Entity maintenance

∞ The [organisation](#) shall [record](#) its current and any previous [purpose](#) and status, together with any [organisations](#) that it is directly related to.

The [organisation](#) shall have [arrangements](#) for:

- a) Maintaining its legal status that provides the basis for conducting [commercial operations](#) aligning with its [purpose](#), [strategy](#), [policy](#) and [objectives](#),
- b) Maintaining relationships with relevant special interest groups.

### C.3.2. Marketing

∞ The [organisation](#) shall establish and [maintain arrangements](#) for [identifying](#), anticipating and satisfying [customer](#) and other [stakeholder needs](#) and [expectations](#) profitably or in a financially viable way, appropriate to the size and type of [organisation](#), including:

- a) A [marketing plan](#) forming part of or harmonising with the [strategic plan required](#) by section C.1.2 [Strategic plan](#)
- b) Development and protection of [brand\(s\)](#) and [intellectual property](#) – see also sections C.4.4 [Conventions](#) and C.3.3 [Contracts](#),
- c) Media that accurately, simply and [transparently communicates](#) the benefits and features of the [organisation's goods](#) and [services](#),
- d) The collection, collation and [analysis](#) of financial, [goods/services](#), [market](#) and competitor [data](#) – refer to sections C.10.2 [External reactive investigation](#), C.11.6 [Survey and benchmarking](#) and C.4.3.2 [Indicators](#),
- e) Agreed [objectives](#) as per section C.1.4 [Objectives](#),
- f) A [process](#) for receiving, filtering and responding to enquiries and otherwise interacting with existing and potential [customers](#) and other [stakeholders](#) – refer to section C.2.5.2 [Communication, consultation, participation and reporting](#),
- g) Surveying the external [commercial environment](#) and the collecting and collating [data](#) – refer to sections C.10.2 [External reactive investigation](#), C.11.6 [Survey and benchmarking](#) and C.4.3.2 [Indicators](#),

- h) [Identifying](#), assessing and evaluating [commercial prospects and risks](#) that fulfil the [organisation's purpose](#) and [strategic/marketing plans](#) – refer to section C.1.6 [Prospect and risk assessment](#),
- i) Converting appropriate [prospects](#) into orders for the [organisation's goods](#) and/or [services](#) – refer to section C.3.3.1 [Pre-Contract](#).

The [organisation](#) shall:

- k) [Communicate](#) with external [stakeholders](#) as per section C.2.5.2.2 [External communication, consultation, participation and reporting](#),
- l) [Maintain customer](#) care and support [arrangements](#).

The [organisation's marketing structures](#) and [processes](#) shall, [as appropriate](#), within its [sphere of influence](#), promote:

- a) [Commercial responsibility](#), [S]
- b) [Social responsibility](#). [G]

### C.3.3. Contracts

∞ The [organisation](#) shall Implement [contractual arrangements](#) that:

- a) Support [normal structures](#) and [normal process](#) - 0 [Normal Structures and Processes](#),
- b) Support [contingency structures](#) and [contingency processes](#) – refer to section 0 [Contingency Structures and Processes](#),
- c) Promote the prevention and detection of [bribery](#), corruption, fraud and [commercially irresponsible](#) practices that could influence [commercial](#) negotiations or the award of [contracts](#) – refer to sections C.1.6 [Prospect and risk assessment](#) and C.2.2 [Responsibilities and authorities](#),
- d) Safeguard [intellectual property](#).

The [organisation](#) shall, within its [sphere of influence](#), promote [social responsibility](#). [G]

[Significant contracts](#) shall only be completed after an appropriate [process](#) of [due diligence](#) has been performed that takes account of [prospect and risk assessment](#) – refer to C.1.6 [Prospect and risk assessment](#).

[Contracts](#) shall address [confidentiality requirements](#), as relevant.

Negotiation [processes](#) shall be [commercially responsible](#) based on a [plan](#) agreed by the negotiating team. [S]

The [organisation](#) shall [define](#) a set of generic rules to be contained within [contracts](#) that promote:

- [Commercially responsible](#) outcomes. [S]
- [Socially responsible](#) outcomes. [G]

[Contracts](#) shall:

- a) [Define](#) the relationship of the participating parties,
- b) Be [structured](#) according to [expert](#) advice compliant with section C.2.3 [Provision of expert advice and assistance](#),
- c) Be compliant with the [organisation's policy](#) as per section C.1.3 [Policy statement](#) and be accurate, factual and [reviewed](#) before being offered to the other party(s),

- d) Cover the care of [stakeholder assets](#) under the [organisation's](#) control or being used by the [organisation](#), an associate, contractor or [supplier](#).
- e) [Define](#) or reference controlled [data](#) that will be provided to relevant parties with regard to:
  - The [goods](#) and/or [services](#) to be provided,
  - The [requirements](#) for approval or release of [goods](#) and [services](#), [procedures](#), [processes](#) or equipment,
  - The [requirements](#) for personnel [competence](#) and [behaviour](#) – refer to section C.2.4.4 [Competence](#),
  - The [management system requirements](#),
  - The control of non-physical [assets](#) including [data](#),
  - The control of physical [assets](#),
  - The control and [monitoring](#) of an external provider's [performance](#) to be applied by the [organisation](#) – refer to section C.6.1 [Classification, vetting and control](#) and C.6.4 [Performance evaluation](#),
  - Periodic [review](#) of [contract](#) implementation progress – refer to section 0 [Review and Action](#),
  - Any [verification](#) activities that the [organisation](#), or its [customer](#), or other [stakeholders](#) intends to perform at the external provider's premises,
  - The [requirements](#) for handling of external provider's property provided to the [organisation](#).

Received and issued [contract documents](#) shall be controlled as per section C.4.2.5 [Contract documents and data](#). [Access](#) to [contractual data](#) shall be appropriately restricted as per section C.4.2.10 [Access](#).

[Goods](#) and [services](#) shall be procured from approved [suppliers](#) as per section 0 [Suppliers](#).

[Authority](#) to sign [contracts](#) shall be given to designated personnel according to the potential associated [risks](#) in compliance with section C.2.2 [Responsibilities and authorities](#).

[Contractual processes](#) shall be subject to [monitoring](#) and [review](#) as per sections 0 [Reactive investigation – events](#), 0 [Planned monitoring](#) and 0 [Review and Action](#).

[Contract reviews](#) conducted during pre-[contract](#), [contract](#) implementation and [contract](#) change shall ensure that:

- f) [Goods](#) and [services requirements](#) are [defined](#), agreed and comply with the [organisation's management system](#), legislation and adopted standards,
- g) [Contract](#) or order [requirements](#) differing from those previously expressed are resolved,
- h) The [organisation](#) is able to meet the [defined requirements](#).

[Records](#) of [contract reviews](#) shall be retained as per section C.4.2.9 [Records](#).

### C.3.3.1. Pre-Contract

∞ Proposed [contracts](#) shall be [prospect and risk assessed](#) as per section C.1.6 [Prospect and risk assessment](#) taking account of [stakeholder needs](#) and [expectations](#).

Where the [organisation](#) is cooperating and coordinating with another organisation(s) to supply a [good](#) or [service](#) the [management system](#)(s) to be used in the [contract](#) implementation shall be [defined](#).

The [organisation](#) shall control [processes](#) prior to the enactment of a [commercial contract](#) and cover, [as applicable](#):

- a) The control of the preparation of proposals, quotations and [tenders](#) applicable to the [organisation](#) and take account of the size, complexity and frequency of delivery of the [good](#) and/or [service](#) delivery,
- b) [Identification](#) and approval [suppliers](#) as per section 0 [Suppliers](#) and seek multiple proposals, quotations and [tenders](#),
- c) The determination of [customer](#) or [supplier](#) and other [stakeholder requirements](#), including care of assets,
- d) Issues requiring cooperation and coordination,
- e) Seeking [equitable](#) win-win situations during [contract](#) negotiation compliant with sections C.1.2 [Strategic plan](#) and C.1.3 [Policy statement](#),
- f) Conducting [investigations](#) and [inspections](#) as necessary to scope and [structure](#) the [contract](#) and minimise [uncertainties](#) as per section C.11.5 [Inspection](#),
- g) Preparation and [review](#) proposals, quotations and [tenders](#) appropriate the associated [prospect](#) and [risk](#),
- h) Preparation of revised proposals, quotations or [tenders](#) if the potential [customer](#) changes the specification.
- i) Ensuring there is sufficient [competence](#) to deliver what is requested,
- j) Confirming an adequate [good and/or service delivery capability](#),
- k) [Commercial](#) and other relevant [prospects](#) and [risks](#) are acceptable,
- l) Confirming transaction is within assigned [authority](#) under section C.2.2 [Responsibilities and authorities](#),
- m) Proposed expenditure does not exceed the approved budget or permission to exceed it has been approved as per section C.3.4 [Finance](#).

[Contracts](#) shall, [as applicable](#), address:

- n) [Communication](#) as per section C.2.5.2 [Communication consultation, participation and reporting](#),
- o) Deliverables including timing and location,
- p) Payments,
- q) Contingencies,
- r) [Conventions](#) as per section C.4.4 [Conventions](#)

With respect to competitive [tendering](#), the bid price shall take account of:

- s) The associated [prospects and risks](#) including the complexities as per section C.1.6 [Prospect and risk assessment](#);
- t) [Market knowledge](#) and [data](#) – refer to section C.3.2 [Marketing](#),
- u) Profit expectation.

[Significant](#) quotations and [tenders](#) shall be independently [reviewed](#) against approved [criteria](#) established by the [organisation](#) by [competent](#) persons – refer to section C.2.4.4 [Competence](#).

### **C.3.3.2. Failure to establish a contract**

∞ Following a [failure](#) to establish a [contract](#) the [organisation](#) shall seek reasons and/or [data](#) and conduct a [review](#) to support [continual](#) improvement – see section 0 [Review and Action](#) .

### C.3.3.3. Contract implementation

∞ [Significant customer contracts](#) shall be [reviewed](#) to confirm that the [arrangements](#) are still valid.

[Contract](#) implementation [plans](#) shall be [created](#) or updated, [as appropriate](#) and shall comply with section **Error! Reference source not found.** [Normal Structures and Processes](#).

Where appropriate, [contracts](#) or [aspects](#) of [contracts](#) shall be [managed](#) as [projects](#) – refer to section C.7.1.5 [Projects](#).

[Contractual requirements](#) shall be subject to periodic [verification](#) and [monitoring](#) to ensure compliance as per section 0 [Planned monitoring](#).

The [organisation](#) shall have [arrangements](#) for negotiating and enacting [contract](#) variations and shall include appropriate [review](#).

[Contract](#) implementation progress [review\(s\)](#) shall be periodically conducted and comply with the [contract](#) – refer to sections C.3.3 [Contracts](#) and 0 [Review and Action](#).

Change shall be [managed](#) taking account of [contracts](#) – refer to section C.9.1 [Change lifecycle](#).

[As applicable](#) on [contract](#) completion [access](#) to [infrastructure](#) and [data](#) rights granted under the [contract](#) shall be withdrawn as per section C.2.4.9 [Leaving](#).

### C.3.3.4. Post Contract

∞ Implementation of the [contract requirements](#) shall be [verified](#).

For [significant projects](#) the [organisation](#) shall conduct a post [contract validation](#) and [review](#) to [determine opportunities](#) for improvement.

Where applicable, [review](#) subcontractor [performance](#) and [record data](#) to aid future selection as per section C.6.4 [Performance evaluation](#).

Monitor [customer](#) satisfaction as per sections 0 [Reactive investigation](#), and 0 [Planned monitoring](#) and if necessary initiate [contingency processes](#) as per section C.8.5 [Event response](#).

## C.3.4. Finance

∞ [Significant](#) financial situations and decisions shall be subjected to [prospect and risk assessment](#) as per section C.1.6 [Prospect and risk assessment](#).

The [organisation](#) shall create or adopt and configure a [commercial](#) accounting [database](#) as per section C.4.3.1 [Accounts](#).

The [organisation](#) shall [create](#) a budget forecast and approve according to section C.12.2 [Review](#). Expenditure shall not exceed the budget without prior approval.

Annual and periodic financial reports shall be prepared for [management review](#) and [action](#) including mandatory reporting as per sections 0 [Management review scheduling](#) and C.2.5.2.2 [External communication consultation, participation and reporting](#).

Financial records shall be independently [audited](#) to meet [stakeholder requirements](#).

#### **C.3.4.1. Revenue**

∞ The [organisation](#) shall have [arrangements](#) for:

- a) Raising timely invoices and submitting them to [customers](#) in compliance with contracts covered under section C.3.3.3 [Contract implementation](#).
- b) Receiving payments,
- c) [Tracking](#) payment of invoices and handling overdue payments including debt recovery.

[Significantly](#) late payment or situations involving legal [action](#) shall comply with section 0 [Reactive investigation](#).

#### **C.3.4.2. Payments**

∞ Managers shall ensure that payment is

- a) Within assigned [authority](#) under section C.2.2 [Responsibilities and authorities](#),
- b) Does not exceed the approved budget or approval to exceed it has been obtained.

[Arrangements](#) shall be established for collecting appropriate [data](#) and determining that [contractual](#) payments are compliant with section C.4.2.10 [Processing](#). See also section C.6.3 [Receipt](#).

Payments shall be approved and paid by designated personnel as per C.2.2 [Responsibilities and authorities](#).

All payments due to internal and external personnel and bodies shall be paid promptly in compliance with [contractual arrangements](#) made under section C.3.3 [Contracts](#).

The [organisation](#) shall responsibly pay taxes to the government where its principal [operations](#) are located, based on a calculation of the profits generated within this location. [S]

Payment transactions not complying with the above [arrangements](#) shall initiate [action](#) as per section 0 [Reactive investigation](#).

#### **C.3.4.3. Banking and cash**

∞ The [organisation](#) shall establish and [maintain robust prospect and risk assessed](#) banking [arrangements](#) meeting the needs of the [organisation](#) compliant with sections C.1.6 [Prospect and risk assessment](#), 0 [Suppliers](#) and the [strategic plan](#) covered in section C.1.2 [Strategic plan](#).

On receipt of bank statements, the [organisation](#) shall [reconcile](#) the [data](#) with the [commercial](#) accounts [data](#) as per section C.4.3.1 [Accounts](#).

Ensure that all cash received from [customers](#) is paid into a bank, or other [secure](#) depository, as soon as [practicable](#) and not left onsite, apart from a petty cash float not exceeding a specified level. [Significant](#) amounts of cash shall be transported according to [prospect and risk assessed arrangements](#) as per section C.1.6 [Prospect and risk assessment](#) and where necessary via approved [suppliers](#) as per section 0 [Suppliers](#).

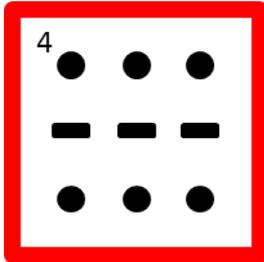
Petty cash shall be:



- a) Kept [secure](#),
- b) [Recorded](#),
- c) [Reconciled](#) with [commercial](#) accounts at a specified periodicity as per section C.4.3.1 [Accounts](#).

Any [significant](#) undesired [events](#) involving banking or cash shall be handled as per as per sections 0 [Reactive investigation](#)

## C.4. Data



∞ The [organisation](#) shall formally [define arrangements](#) for controlling and guiding the [management](#) of [data](#) emanating from inside and outside of the [organisation](#) covering:

C.4.1 [Management system structure](#)

C.4.2 [Data control](#)

C.4.3 [Data processing](#)

C.4.4 [Conventions](#).

The [organisation](#) shall ensure that [data management](#) is compliant with its [policy](#), [strategic plan](#), [objectives](#) and legislation – refer to sections C.1 [Assessment and Development of Controls](#).

[Data structures](#) shall be [designed](#) as per section C.7.1 [Structure and process design](#) and where appropriate purchased, processed and [maintained](#) by approved [suppliers](#) as per section 0 [Suppliers](#).

[Structures](#) and [processes](#) shall be [validated](#) as per section C.1.7 [Performance justification](#), where [required](#) by [stakeholders](#).

Some of the [arrangements](#) shall be [covert](#), where a [need](#) has been identified – refer to section A.4 [Covert management arrangements](#).

### C.4.1. Management system structure

∞ The [organisation](#) shall [document](#) the [management system](#) covering all [processes](#) to a level appropriate to the potential [impact](#) of the various facets of the [organisation's performance](#) including [commercial](#), [goods](#) and [services quality](#), personnel [health](#), [safety](#) and [welfare](#), [environmental impact](#), valuable [assets](#), reputation and multiple [aspects](#) of overall [security](#) – refer to [Appendix 6: General Aspects of an Organisation](#).

The documented [management system structure](#) and its elements shall:

- a) Be suitably and sufficiently [documented](#) to satisfy [stakeholder needs](#) and [expectations](#),
- b) Address the general [requirements](#) and the twelve specific elements of this [MSS](#) – refer specifically to section B.3 [Stakeholder specific requirements](#),
- c) Include:
  - A description of the [structure](#) and functioning of the [management system](#) and its component types,
  - A [policy statement](#),
  - [Management procedure\(s\)](#) addressing this [MSS](#) and [responsibilities](#) assigned,
  - [Documents](#), where [required](#), defining the conduct of work [processes](#) to meet the [needs](#) and [expectations](#) of [stakeholders](#),
- d) Have an assigned [responsible](#) manager(s) refer to section C.2.2 [Responsibilities and authorities](#),
- e) Be fit for [purpose](#) and address 'what, how, where, who, when and why', [as applicable](#),
- f) Be readily navigable,
- g) Facilitate [effective](#) and [efficient planned monitoring](#),
- h) Be capable of being [effectively](#) and [efficiently reviewed](#) and if necessary modified to ensure it remains aligned with [stakeholder needs](#) and [expectations](#) and where possible improved,

- i) Collectively demonstrate compliance with adopted [management system](#) standards and [management system](#) legislation, [as applicable](#),
- j) Reference [significant](#) superior, peer and subordinate related [documents](#),
- k) Be [managed overtly](#) or [covertly as appropriate](#) according to section C.1.2 [Strategic plan](#) and [access](#) controlled as per section and C.4.2.10 [Access](#).

The [arrangements](#) shall [define](#) when a [document](#) needs to be [available](#) at the point that the activity is performed and if it should be followed step-by-step or just referred to as necessary.

A master list of [management system documents](#) shall be [maintained](#) and controlled as per section C.4.2 [Control](#).

## C.4.2. Data control

∞ The [organisation](#) shall designate a person or persons having [responsibility](#) for coordinating [data](#) control covered within the classes below – refer to section C.2.2 [Responsibilities and authorities](#).

Equipment requirements that store [data](#) is defined in sections C.5.4.3.4 [Data equipment](#) and C.5.4.3.5 [Mobile plant and equipment](#).

[Data](#) control [arrangements](#) shall cover:

- C.4.2.1 [Databases](#)
- C.4.2.2 [Internal documents](#)
- C.4.2.3 [External documents](#)
- C.4.2.4 [Library](#)
- C.4.2.5 [Contract documents and data](#)
- C.4.2.6 [Infrastructure and goods documentation and data](#)
- C.4.2.7 [Marketing literature and website](#)
- C.4.2.8 [Computer software](#)
- C.4.2.9 [Records](#)
- C.4.2.10 [Access](#)

The [management arrangements](#) for controlling [data](#) shall [define](#), [as applicable](#), distribution, [access](#), retrieval, use, [access](#), change notification, storage, preservation and retention with respect to the above classes of [data](#).

Where [data](#) is [managed](#) remotely from the prime location, it shall meet equivalent or enhanced standards based on or informed by [prospect and risk assessment](#). See also sections C.2.1.1 [Remote working](#), C.5.4.3.4 [Data equipment](#) and C.5.4.3.5 [Mobile plant and equipment](#).

The control of [data](#) shall be [overt](#) or [covert](#) as per section C.1.2 [Strategic plan](#). See also section A.4 [Covert management arrangements](#).

[Data](#) received from a [supplier](#) shall comply with section C.6.3 [Receipt](#).

### C.4.2.1. Databases

∞ The [organisation](#) shall:

- a) Designate [responsible](#) persons to administer [databases](#) – refer to section C.2.2 [Responsibilities and authorities](#),
- b) Establish and [maintain databases](#) to meet the [requirements](#) of the [organisation](#) and list in a [schedule](#),
- c) Ensure [databases](#) have [access](#) control appropriate to the significance of the data stored as per section C.4.2.10 [Access](#),

The [database](#) administrator shall ensure that [data](#) is up to date and where appropriate [verified](#) and [validated](#).

Computer [database software](#) shall be [managed](#) as per section C.4.2.8 [Computer software](#).

Single integrated [databases](#) shall be established except where it can be demonstrated that it will not add [significant value](#). [S]

#### **C.4.2.2. Internal documents**

∞ Internal [documents](#) shall be logically titled and numbered and comply with section C.4.4 [Conventions](#) and [classification](#) of [structures](#) and [processes](#) as per section C.1.1 [Foundation planning](#).

The detail contained within [work instructions](#) shall be suitable and sufficient for the [purpose](#) of the task and enable it to be satisfactorily completed by personnel of a [defined competence](#) – refer to section C.2.4.4 [Competence](#).

Internal [documents](#) may reference external controlled [documents](#) to avoid duplication.

The [organisation](#) shall [maintain](#) a [schedule](#) of all internal controlled [document](#) types and include the [responsible](#) persons for their preparation, [review](#), issue and distribution.

Controlled [documents](#) under development shall be suitably marked to indicate their status and dated.

All [documents](#) shall be [effectively reviewed](#) by the relevant internal [stakeholders](#) prior to their approval and will be [recorded](#) and dated.

The [responsible](#) person(s) shall notify relevant personnel when an internal controlled [document](#) has changed as per section C.2.5.2.1 [Internal communication, consultation, participation and reporting](#). All superseded [documents](#) shall be destroyed, clearly marked superseded or made [inaccessible](#) to normal users.

The [responsible](#) person shall [maintain](#) a [database](#) listing all internal controlled [documents](#) and their current status.

All uncontrolled copies of [documents](#) shall be clearly marked as 'uncontrolled'.

New [employees](#) shall be formally issued with the [required](#) controlled [documents](#) on entering the [organisation](#) and withdrawn on their departure as per section C.2.4 [Employment life cycle](#).

Retain [records](#) as per section C.4.2.9 [Records](#).

#### **C.4.2.3. External documents**

∞ The [organisation](#) shall

- a) Designate a person(s) [responsible](#) for controlling external controlled [documents](#) – refer to section C.2.2 [Responsibilities and authorities](#),
- b) [Identify](#) key non-[contract](#) external [documents](#) that have an [impact](#) on the [organisation's operations](#) and are [required](#) to be controlled and [recorded](#) in a [schedule](#).

External [documents](#) shall be controlled as per internal [documents](#) covered in section C.4.2.2 [Internal documents](#) if they are made [accessible](#) or issued outside of the external [document](#) controller's [system](#).

[Documents](#) supplied with [goods](#) essential to their use, [operation](#) or [maintenance](#) shall be retained by the [organisation](#) and made [available](#) to relevant personnel – refer to section C.6.3 [Receipt](#).

#### C.4.2.4. Library

∞ If applicable to its functionality, the [organisation](#) shall:

- a) [Create](#) a [data](#) reference library to meet the [explicit knowledge requirements](#) of the [organisation](#),
- b) Designate a person(s) [responsible](#) for controlling the library – refer to section C.2.2 [Responsibilities and authorities](#),
- c) [Maintain](#) a [schedule](#) of the library contents including standards, regulations, codes and other relevant references relevant to the [operation](#) of the [organisation](#). See also C.1.5 [Legislation and standards](#),
- d) Where a [need](#) has been identified, hold superseded reference [documents](#) clearly marked as 'Superseded' and [segregated](#) from current copies,
- e) Include external controlled [documents](#), [as applicable](#), as per section C.4.2.3 [External documents](#),
- f) Conduct periodic checks that library [documents](#) [reconcile](#) with appropriate published catalogues of [databases](#) and take [corrective action](#) as per section C.9.2 [Corrective and preventive action](#),
- g) When [documents](#) are revised, carry out [reviews](#) to [identify](#) any potential [impact](#) on the [organisation's structures](#) and [processes](#) and [required management actions](#) as per section 0 [Review and Action](#).

Library [documents](#) shall be controlled as per internal [documents](#) covered in section C.4.2.2 [Internal documents](#) if they are made accessible or issued outside of the library.

#### C.4.2.5. Contract documents and data

∞ [Documents](#) and [data](#), received and issued as part of pre or post [contract commercial processes](#) shall be [managed](#) as controlled [documents](#) and [maintained](#) in orderly [secure systems](#) compliant with sections C.4.2.2 [Internal documents](#), C.4.2.3 [External documents](#) and C.4.2.10 [Access](#). See also C.3.3 [Contracts](#).

#### C.4.2.6. Infrastructure and goods documentation and data

∞ The [organisation](#) shall ensure all [infrastructure](#) and [goods documentation](#), including [personal protective equipment documentation](#), is preserved from receipt to issue to personnel, [data](#) centres, archives or delivery to [customers](#) or other [stakeholders](#), [as applicable](#).

[Infrastructure](#) and [goods data](#) shall be [accessible](#) by personnel who [need](#) it at the location where it is needed as per section C.4.2.2 [Internal documents](#), C.4.2.3 [External documents](#) and C.4.2.4 [Library](#).

[Infrastructure](#) and [goods data](#) shall be updated following modifications, new purchases and decommissioning or demolition as well as new acquisitions. Refer to section 0 [Change](#).

#### **C.4.2.7. Marketing literature and website**

∞ The [organisation's marketing data](#) and web sites shall:

- a) Be factual, current and informative without being misleading,
- b) Comply with [stakeholder contracts](#), agreements and licenses including scope of accreditations and [certifications](#),
- c) Comply with the [organisation's policy](#) as per section C.1.3 [Policy statement](#),
- d) Comply with the [organisation's conventions](#) as per section C.4.4 [Conventions](#).

Refer also to section C.2.5.2.2 [External communication, consultation, participation and reporting](#).

#### **C.4.2.8. Computer software**

∞ The [organisation](#) shall evaluate its needs for computer [software](#) including [security](#) and multiple [access requirements](#) prior to purchase or internal development via an appropriate [prospect and risk assessment](#) as per sections C.1.6 [Prospect and risk assessment](#), C.4.2.10 [Access](#) and C.4.2.11 [Loss and corruption](#).

The installation of [operational software](#) on the [organisation's systems](#) shall be controlled.

The organisation shall [maintain](#) a [schedule](#) of the [software](#) used to [manage](#) its [operations](#) and include:

- a) Its developer or [supplier](#), license details and issue, [as applicable](#),
- b) The designated [responsible](#) person within the [organisation](#),
- c) Its [purpose](#).

[Software](#) and [software](#) support [processes](#) shall be procured from approved [suppliers](#) as per section 0 [Suppliers](#).

Modifications to [software](#) packages shall be discouraged and limited to necessary changes, which shall be strictly controlled as per section 0 [Change](#).

[Databases](#) shall be [managed](#) as per section C.4.2.1 [Databases](#).

[Data security](#) is covered in sections C.4.2.10 [Access](#) and C.4.2.11 [Loss and corruption](#).

#### **C.4.2.9. Records**

∞ The [organisation](#) shall:

- a) [Identify](#) types of [records required](#) to meet the [organisation's](#) and [stakeholders requirements](#), the media and the retention period, and list in a [schedule](#) or other suitable instrument – refer to section C.1.5 [Legislation and standards](#),
- b) [Maintain](#) a suitable and sufficient [secure](#) archive for all [record](#) requirements,
- c) Ensure all [required records](#) are [systematically](#) generated through the [operation](#) of [organisation processes](#) and entered into the [record](#) storage [systems](#),
- d) Periodically destroy archived [records required](#) by its [record schedule](#).

The [organisation](#) shall generate suitable and sufficient [records](#) compliant with the [schedule](#) and able to demonstrate compliance with the current and previous versions of the [organisation's management system](#), facilitate [planned monitoring](#) and [assurance](#) and to facilitate [event investigation](#).

[Records](#) shall be authorized and dated by the creator at the time of generation.

[Records](#) found to be false or inaccurate shall be rectified and a [record](#) made demonstrating the change as per section C.9.2 [Corrective and preventive action](#).

[Record](#) archives shall satisfy [stakeholder requirements](#) – refer to sections C.1.5 [Legislation and standards](#) and B.3 [Stakeholder specific requirements](#) and take account of [risks](#) as per section C.1.6 [Prospect and risk assessment](#).

[Records](#) shall be protected from loss, destruction, falsification, unauthorized [access](#) and unauthorized release, in accordance with legislation, [contractual](#) and the [organisation's requirements](#), and controlled as per section C.4.2.10 [Access](#).

#### **C.4.2.10. Access**

∞ [Data](#) shall be [structured](#) and [managed](#) to allow [effective](#) and [efficient access](#) allowing:

- a) Personnel to fulfil their [post](#) or [role](#),
- b) [Stakeholders](#) to reasonably [access data](#) relating to them and to request [corrections](#) or deletions [as applicable](#),
- c) [Data](#) to be [maintained](#) appropriately [overt](#) or [covert](#) as per section C.1.2 [Strategic plan](#).

A registration and deregistration system shall be established and maintained to restrict [access](#) according to authorisation and [manage](#) secret authentication [data](#) – refer to section C.2.2 [Responsibilities and authorities](#).

[As appropriate](#), effective use of [cryptography](#) controls shall be implemented to protect the [confidentiality](#), authenticity and/or [integrity](#) of [data](#), including [life time](#) use and protection of [cryptographic keys](#).

See also section C.2.5.2 [Communication, consultation, participation and reporting](#). Physical access protection barriers are covered in section C.5.4.5 [Access, egress and protective barriers](#).

#### **C.4.2.11. Loss and corruption**

∞ The [organisation](#) shall ensure that:

- a) [Data](#) loss and corruption controls are [risk based](#) or [risk informed](#) to prevent accidental loss or theft as per section C.1.6 [Prospect and risk assessment](#),
- b) [Arrangements](#) are maintained to detect, [prevent](#) and recover from [malware](#),
- c) All areas where [confidential](#) information is stored are [secure](#) with entry only permitted to appropriate [organisation](#) staff as per sections C.5.4.5 [Access, egress and protective barriers](#) and C.2.2 [Responsibilities and authorities](#),
- d) [Access](#) to personnel [confidential](#) information is restricted to designated staff – refer to section C.2.2 [Responsibilities and authorities](#),

- e) [Data access](#) with appropriate permissions is provided to personnel – refer to section C.2.4.2 [Induction](#),
- f) Password or alternative controls, [as appropriate](#), are applied to restrict the reading and modification of electronic [documents](#),
- g) Locks and/or passwords etc. are changed if a breach of [security](#) is detected or suspected – refer to 0 [Contingencies](#),
- h) Computer [data](#) is backed up against accidental and deliberate theft guarded from common causes of failure,
- i) All areas subject to restricted entry are [secured](#) when occupied or unattended, [as appropriate](#), as per section C.5.4.5 [Access, egress and protective barriers](#),
- j) Any client [contract](#) specific [security requirements](#) are implemented – refer to section C.3.3 [Contracts](#).

Where [data](#) is under the control of external [organisations](#) they shall be approved [suppliers](#) and appropriately [monitored](#) as per sections 0 [Suppliers and](#) 0 [Planned monitoring](#). The [data control requirements](#) in this section shall be covered in [contracts](#), [as applicable](#), as per section C.3.3 [Contracts](#).

### C.4.3. Data Processing

∞ The [organisation](#) shall establish and [maintain](#) a [schedule](#) of essential automated and non-automated [data processing](#) tasks [required](#) to support the [operation](#) of the [organisation](#).

[Data processing](#), where appropriate, shall employ [validated](#) statistical methods as per section C.1.8 [Management tools and techniques](#).

#### C.4.3.1. Accounts

∞ The [organisation](#) shall adopt and configure an accounting [database\(s\)](#) compliant with sections C.4.2.1 [Databases](#), C.4.3.1 [Accounts](#) and C.4.2.8 [Computer software](#).

The designated [responsible](#) person shall periodically [reconcile](#) the accounts with other existing [databases](#) or results of [inspections](#). Major discrepancies shall be treated as [events](#) as per section 0 [Reactive investigation](#) and [corrective action](#) and [preventive action](#) taken as per section C.9.2 [Corrective and preventive action](#).

#### C.4.3.2. Indicators

∞ Suitable and sufficient [lagging indicators](#), [coincident indicators](#) and [leading indicators](#) and their means of generation shall be [defined](#) to support the [effective monitoring](#) of the [organisation](#) and [projects](#) and [management review processes](#) to facilitate [effective](#) and [efficient management control](#) – refer to sections 0 [Reactive investigation – Events](#), 0 [Planned monitoring](#), 0 [Review and Action](#) and [Appendix 6: General Aspects of an Organisation](#).

[Arrangements](#) shall be [defined](#) for [processing indicators](#), as [required](#).

[Key performance indicators](#) shall be [defined](#), [as appropriate](#), to the size and complexity of the [organisation](#):

- a) Covering all facets of the [organisation's performance](#) including [commerce](#), [health](#), [safety](#), [environment](#), [goods](#) and [services quality](#) etc.,

- b) Covering [commercial responsibility](#) performance, [S]
- c) Covering [social responsibility](#) performance, [G]
- d) Indicating the degree that [customer](#) and other [stakeholder](#) believe that [requirements](#) have been met,
- e) Indicating the degree that [structures](#) and [processes](#) are [effective](#) and [efficient](#),
- f) Cover [reactive](#) and [planned monitoring](#) outputs,
- g) Cover the twelve principal elements of this [MSS](#) – refer to Figure 4: Universal Plan-Do-Check-Act Twelve Element Structure,
- h) Be arranged into a multilevel hierarchical [structure](#) appropriate to the size and complexity of the [organisation](#). [S]

Changes in [key performance indicators](#) shall be [monitored](#), [investigated](#) and [analysed](#) for statistical significance and suitably reported for [management review](#) and [action](#) conducted according to section 0 [Review and Action](#).

Retain [records](#) as per section C.4.2.9 [Records](#).

#### **C.4.4. Conventions**

∞ [Conventions](#) shall be established to [create](#) uniformity and orderliness supporting more [effective](#) and [efficient processes](#), [communication](#) and the promotion of the [organisation's brand](#). [S] See also sections C.2.5.2 [Communication, consultation, participation and reporting](#) and C.3.2 [Marketing](#).

[Conventions](#) shall be [defined](#) for [process](#) inputs and outputs [identification requirements](#) – refer to section C.7.1.1 [Structure and process definition](#).

Where [practicable](#), [colour coded communication](#) should not unduly discriminate against those with a colour sight disability – refer to sections C.1.3 [Policy statement](#) and C.2.4.4.4 [Fitness](#).

[Conventions](#) used as [management controls](#), e.g. signage, shall, as appropriate, take account of special classes of personnel – refer to sections C.2.4.4.4 [Fitness](#) and C.1.6.5 [Prospect and risk improvement](#).

##### **C.4.4.1. Style and colour**

∞ Define style and area of application covering, [as applicable](#): [≠U]

- a) Logos, [brands](#), [trademarks](#) and [service marks](#),
- b) Typefaces,
- c) Colour.

##### **C.4.4.2. Nomenclature**

∞ [Systems](#) of nomenclature shall wherever [practicable](#) be standardised and hierarchical to aid [communication](#) as per section C.2.5.2 [Communication, consultation, participation and reporting](#).

Nomenclature for the [organisation's structures](#) and [processes](#) should wherever [practicable](#) align with personnel [defined competence requirements](#) – refer to section C.2.4.4 [Competence](#).

##### **C.4.4.3. Dimensions**

∞ [Systems](#) of dimensions shall wherever [practicable](#) be standardised to aid accurate [communication](#) as per section C.2.5.2 [Communication, consultation, participation and reporting](#), align with personnel



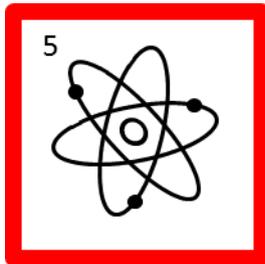
[competences](#) as per section C.2.4.4 [Competence](#) and meet [stakeholder](#) needs – refer to section C.7.1 [Structure and process design](#) .

#### **C.4.4.4. Language**

∞ Language(s) used shall comply with the [organisation's policy](#) and meet the needs of [stakeholders](#) – refer to sections B.1 [Scope of organisation's arrangements](#) and C.1.3 [Policy statement](#).

[Organisations](#) shall endeavour to use universal and consistent terminology when [communicating](#) with [stakeholders](#) verbally or in writing – refer to [Definitions](#).

## C.5. Matter and Energy



∞ The [organisation](#) shall formally [define arrangements](#) for controlling and guiding the [management](#) of matter and energy covering:

C.5.1 [Selection and combination](#)

C.5.2 [Handling and use](#)

C.5.3 [Processing](#)

C.5.4 [Infrastructure](#)

C.5.5 [Maintenance, inspection and testing](#)

C.5.6 [Waste and emissions](#).

The organisation shall ensure that [management](#) of matter and energy is compliant with its [policy](#), [strategic plan](#), objectives and legislation – refer to sections C.1 [Assessment and Development of Controls](#).

[Structures](#) and [processes](#) shall be [validated](#) as per section C.1.7 [Performance justification](#), where [required](#) by [stakeholders](#).

Some of the [arrangements](#) may be [covert](#), as necessary – refer to section A.4 [Covert management arrangements](#).

### C.5.1. Selection and combination

∞ [Organisations](#) shall be able to demonstrate that selected matter and energy and their form, [structure](#), quantity and combination used individually or in combination meet the [needs](#) and [expectations](#) of [stakeholders](#). They shall be fit for [purpose](#) and not cause or [threaten](#) undue [harm](#) to personnel, the [environment](#) or other [assets](#) and shall be demonstrated by [prospect and risk assessment](#) as per section C.1 [Assessment and Development of Controls](#). The total [life cycle](#) of materials shall be considered within and outside of the [organisation](#) including the generation of [waste](#) and [emissions](#) addressed in section C.5.6 [Waste and emissions](#).

The [organisation](#) shall [maintain](#) a [schedule](#) of types of material and energy used or generated and information regarding the nature of the material, its use, associated [structures](#) and [processes](#) within the [organisation's operations](#) – see also C.4.1 [Management system structure](#).

### C.5.2. Handling and use

∞ Matter and energy shall be suitably and adequately contained and [managed](#) at all times to [maintain](#) its [integrity](#) and prevent loss or [harm](#) to personnel and the [environment](#) based on:

- a) [Prospect and risk assessment](#) as per section C.1.6 [Prospect and risk assessment](#),
- b) Compliance with identified legislation and standards as per section C.1.5 [Legislation and standards](#).

Manual handling [risk assessments](#) shall be performed for all [significant](#) amounts of individually manually handled objects and materials, and controls established as per section C.1.6 [Prospect and risk assessment](#). [Processes](#) should be optimised as per section C.7.1 [Structure and process design](#) and as much as [practicable](#) potentially [harmful](#) manual handling avoided.

The locations, amounts of material and energy shall be [recorded](#) and accounts [managed](#) as per section C.4.3.1 [Accounts](#).

#### **C.5.2.1. Receipt**

∞ Following receipt of matter and energy the [organisation](#) shall confirm that it is compliant with the purchase order as per section C.6.3 [Receipt](#).

#### **C.5.2.2. Transport**

∞ The [organisation](#) shall ensure that matter and energy are transported in compliance with [planned arrangements](#) that take account of:

- a) Retention of matter and energy [integrity](#) including [data](#) content, [as applicable](#),
- b) [Goods security](#) and unauthorised [access](#),
- c) Applicable legislation and standards – refer to section C.1.5 [Legislation and standards](#),
- d) [Supplier](#) instructions,
- e) [Prospect and risk assessments](#) – refer to section C.1.6 [Prospect and risk assessment](#),
- f) Personnel and [environmental safety](#) and [health](#),
- g) [Contractually](#) agreed [arrangements](#) – refer to section C.3.3.3 [Contract implementation](#),
- h) Best use of [resources](#).

#### **C.5.2.3. Storage**

∞ The [organisation](#) shall ensure that matter and energy are stored in compliance with [planned arrangements](#) that take account of:

- a) Applicable legislation and standards – refer to section C.1.5 [Legislation and standards](#),
- b) [Suppliers](#) instructions,
- c) [Prospect and risk assessments](#) – refer to section C.1.6 [Prospect and risk assessment](#),
- d) [Project plans](#) – refer to section C.7.1.5 [Projects](#),
- e) [Contractually](#) agreed [arrangements](#) – refer to section C.3.3.3 [Contract implementation](#).

The [organisation](#) shall monitor stored matter and energy at suitable intervals to confirm that:

- f) It has not deteriorated,
- g) Is within shelf life,
- h) Labelled or otherwise identifiable,
- i) It is adequately [segregated](#) from other matter and energy, [as applicable](#).

Unfit matter or energy shall be:

- j) Labelled and/or adequately separated from compliant matter and energy,
- k) Returned to the [supplier](#), corrected as per section C.9.2 [Corrective and preventive action](#) or disposed of as [waste](#) as per section C.5.6 [Waste and emissions](#).

### **C.5.3. Processing**

∞ The [organisation](#) shall ensure that [goods](#) are [designed](#), [manufactured](#), used, processed, installed and disposed of in compliance with [planned arrangements](#) that take account of:

- a) Applicable legislation and standards – refer to section C.1.5 [Legislation and standards](#),
- b) Regulatory and licensing [requirements](#),
- c) [Suppliers](#) instructions,

- d) [Prospect and risk assessments](#) – refer to section C.1.6 [Prospect and risk assessment](#),
- e) [Project plans](#) – refer to section C.7.1.5 [Projects](#),
- f) [Contractually](#) agreed [requirements](#) – refer to section C.3.3.3 [Contract implementation](#).

Ensure personnel working on premises and other sites not under the direct control of the [organisation](#) are aware of the local energy and matter potential [hazards](#) as per section C.2.4.4 [Competence](#)

#### C.5.4. Infrastructure

∞ [Infrastructure design, operation](#) and [maintenance](#) shall cater for:

- a) The needs of personnel – refer to section C.1.6.1 [Prospect and risk assessment planning](#),
- b) Variation in personnel [fitness](#) – refer to section C.2.4.4.4 [Fitness](#),
- c) The storage, use and [processing](#) of energy and matter – refer to sections C.5.2 [Handling and use](#), C.5.3 [Processing](#) and **Error! Reference source not found.** [Normal Structures and Processes](#).

[Infrastructure arrangements](#) shall cover:

- C.5.4.1 [Facilities](#),
- C.5.4.2 [Work environment](#),
- C.5.4.3 [Plant and equipment](#),
- C.5.4.4 [Configuration](#),
- C.5.4.5 [Access, egress and protective barriers](#).

##### C.5.4.1. Facilities

∞ The [organisation](#) shall:

- a) Establish controls to ensure [facilities](#):
  - Are fit for [purpose](#),
  - Are [healthy](#) and [safe](#) including [safe access](#) and protection from vehicular traffic,
  - Have suitable and adequate [welfare arrangements](#),
  - Protect and nurture the [environment](#),
  - Are [secure](#) and [create](#) suitable [environments](#) for the preservation of plant, equipment, [documents](#), [data](#), [goods](#), materials and substances,
  - Are located and [designed](#) to minimize potential [threats](#) and [hazards](#) from the [environment](#) and unauthorized [access](#),
  - Contain suitable, sufficient and secure systems to support personnel, [operation](#) of plant and equipment and [processes](#) performed within the [facility](#).
- b) [Maintain](#) a [data](#) file recording the material state of the [organisation's facilities](#) that it is [responsible](#) for including details of [significant hazards](#),
- c) Ensure that elements of [facilities](#) are assigned suitable and sufficient nomenclature to facilitate their [identification](#) and their [effective](#) and [efficient management](#) – refer to section C.4.4 [Conventions](#),
- d) Subject [organisation facilities](#) to an [prospect and risk assessment](#) as per section C.1.6 [Prospect and risk assessment](#),
- e) Ensure that where necessary [access](#) to [facilities](#) is controlled with entry only permitted to designated personnel – refer to section C.2.2 [Responsibilities and authorities](#) and section C.5.4.5 [Access, egress and protective barriers](#),
- f) All areas subject to restricted entry are [secured](#) when unattended,
- g) Establish [facilities contingency arrangements](#) as per section 0 [Contingencies](#),

- h) Establish [arrangements](#) to ensure that [facilities](#) are regularly cleaned and [waste](#) is removed as per section C.5.6 [Waste and emissions](#),
- i) [Manage](#) client [facilities infrastructure](#) when assigned – refer to sections C.3.3 [Contracts](#),
- j) Periodically monitor [facilities effectiveness](#) and compliance with controls as per section 0 [Planned monitoring](#).

#### **C.5.4.2. Work environment**

[∞](#) Work [environments](#) shall:

- a) Be subjected to a [prospect and risk assessment](#) as per section C.1.6 [Prospect and risk assessment](#) and include regular human use of potentially [hazardous](#) equipment such as display screen equipment,
- b) Nurture the [health, safety, welfare](#) and wellbeing of personnel and not negatively [impact](#) any [aspect](#) of [fitness](#) – refer to sections C.7.1 [Structure and process design](#), C.2.4.4.4 [Fitness](#) and [Appendix 6: General Aspects of an Organisation](#),
- c) Implement a clear desk policy, [as applicable](#), to ensure the [security](#) of [data](#),
- d) Be [segregated](#) into zones where process interactions may negatively impact prospect and risk a risk,
- k) Be [monitored](#) as per section 0 [Planned monitoring](#).

#### **C.5.4.3. Plant and equipment**

[∞](#) The [organisation](#) shall:

- a) Purchase or hire equipment that has been subjected to a suitable and sufficient risk assessment as per section C.1.6 [Prospect and risk assessment](#),
- b) Evaluate the suitability of plant and equipment prior to purchase or hire,
- c) Ensure plant and equipment is uniquely identified to aid its [traceability](#) – refer to C.4.4 [Conventions](#),
- d) [Maintain](#) a [schedule](#) of plant and equipment approved for [safety](#) and other critical activities – refer to section C.4.2.2 – [Internal documents](#),
- e) Hire plant and equipment, as necessary, from approved [suppliers](#) as per section 0 [Suppliers](#),
- f) [Maintain, inspect](#) and [test](#) plant and equipment as per section C.5.5 [Maintenance, inspection and testing](#),
- g) [Maintain](#) plant and equipment [records](#) as per section C.4.2.9 [Records](#),
- h) If plant or equipment goes outside of the [organisation's](#) control, check that it is satisfactory before returning it to [service](#),
- i) Ensure owned or hired plant and equipment is within [maintenance, inspections](#) and [test](#) date before using.
- j) Ensure that [arrangements](#) are in place for storing, transporting and immobilising plant and equipment to preserve its [integrity](#) and guard against unauthorised [access](#) or vandalism – refer to section C.5.2 [Handling and use](#),
- k) Ensure plant and equipment is [operated](#) and [maintained](#) by [competent](#) personnel as per section C.2.4.4 [Competence](#) according to [manufacturer's](#) instructions as per section C.4.2.6 [Infrastructure and goods documentation and data](#),
- l) Ensure that plant and equipment is appropriately supervised and is safeguarded when unattended.

##### **C.5.4.3.1. Personal equipment**

[∞](#) The [organisation](#) shall:

- a) Shall select personal equipment that does not [harm](#) the person it is issued to – refer to section C.1.6 [Prospect and risk assessment](#), C.7.1.1 [Structure and process definition](#) and C.7.2 [Structure and process implementation](#).
- b) Ensure that suitable and sufficient [personal protective equipment \(PPE\)](#) and Respiratory Protective Equipment ([RPE](#)) (such as hard hats, gloves, glasses, ear-defenders, high-visibility jackets etc.) are made [available](#) to [employees](#) free of charge,
- c) Procure [PPE](#) and [RPE](#) from suitable [suppliers](#) as per section 0 [Suppliers](#),
- d) Provide storage to [maintain PPE/RPE](#) in fit for [purpose condition](#).

#### **C.5.4.3.2. Monitoring and measuring equipment**

∞ The [organisation](#) shall:

- a) [Determine](#) the [need](#) for [measuring](#) and [test](#) equipment to support [structure](#) and [process conformity](#) – refer to section C.7.1.1 [Structure and process definition](#),
- b) Provide and suitably [maintain monitoring](#) and [measuring](#) equipment – refer to section C.5.5 [Maintenance, inspection, testing and calibration](#),
- c) Evidence of suitability and status – refer to section C.4.2.9 [Records](#).

#### **C.5.4.3.3. Contingency equipment**

∞ The [organisation](#) shall:

- a) [Determine](#) the [requirements](#) for [contingency](#) equipment – refer to section C.8.2.2 [Emergencies, Crises and Disaster Recovery](#),
- b) Ensure that such equipment is suitable and sufficient, and regularly [maintained](#), inspected and tested – refer to sections C.5.5 [Maintenance, inspection, testing and calibration](#) and C.8.3 [Contingency arrangements testing](#).

#### **C.5.4.3.4. Data equipment**

∞ Fixed and portable equipment containing or having the potential to contain [data](#) shall be controlled over its complete [life cycle](#) according to its [classification](#) determined according the [requirements](#) of section C.1.1 [Foundation planning](#).

[As applicable](#), controls shall be established to support the [management](#) of [data requirements](#) covered in section 0 [Data](#). Access to [data](#) shall be controlled as per sections C.4.2.10 [Access](#) and C.5.4.5 [Access, egress and protective barriers](#) .

The clocks of all relevant [data processing systems](#) within an [organisation](#) or [security](#) domain shall be synchronised to a single time reference.

#### **C.5.4.3.5. Mobile plant and equipment**

∞ Additional mobile plant and equipment arrangements shall be established:

- a) To ensure it is only taken off site when permitted for a defined purpose,
- b) To deter theft and prevent unauthorised [access](#) and interference as per section C.5.4.5 [Access, egress and protective barriers](#),
- c) To ensure that it is stored and used in suitable locations with appropriate supervision,
- d) Ensure it is only connected to other appropriate plant or equipment as per section C.5.4.4 [Configuration](#).

#### **C.5.4.3.6. External fixed plant and equipment**

∞ Additional arrangements for plant and equipment located remotely from the [organisation's main facilities](#) shall be established to:

- a) Deter theft and prevent unauthorised [access](#) and interference as per section C.5.4.5 [Access, egress and protective barriers](#),
- b) Prevent interception of [data](#), where relevant,
- c) Ensure it is only connected to other appropriate plant or equipment as per section C.5.4.4 [Configuration](#).

#### **C.5.4.4. Configuration**

∞ The [organisation](#) shall:

- a) Control plant/equipment [infrastructure configuration](#) where it has the potential to [significantly impact performance](#),
- b) [Verify](#) plant/equipment [configuration](#) by suitable and sufficient [inspections](#), as per section C.11.5 [Inspection](#), to provide the [required](#) level of confidence to [stakeholders](#),
- c) Establish and [maintain](#) a plant/equipment [configuration](#) history to meet [stakeholder](#) needs compliant with section C.4.2.9 [Records](#),
- d) Only change permitted [configuration](#) as per section C.9.4 [Structure and process change](#).

#### **C.5.4.5. Access, egress and protective barriers**

∞ [Infrastructure design](#) shall permit personnel to [safely access](#) and egress their [workplace](#) to fulfil their normal [duties](#) and take account of the [requirements](#) of section C.1.6 [Prospect and risk assessment](#).

[Infrastructure](#) shall be [segregated](#) into zones, as necessary, to facilitate the control of personnel [access](#) and egress. Where [required](#), barriers shall be established to prevent:

- a) Unauthorised personnel [access](#) to [data](#) – see also C.4.2.10 [Access](#),
- b) [Harm](#) to personnel, [assets](#) or [environments](#) including,
- c) Escape or loss of valuable or [hazardous](#) substances.

The means of controlled [access](#) and egress penetrating the barriers shall not compromise the barriers' [integrity](#).

Secure areas shall be protected by appropriate entry controls to ensure that only authorized personnel are allowed [access](#).

Physical protection against natural disasters, malicious attack or accidents shall be designed and applied.

### **C.5.5. Maintenance, inspection, testing and calibration**

∞ The [organisation](#) shall [define arrangements](#) for [managing](#):

- C.5.5.1 [Proactive maintenance, inspection and testing](#),
- C.5.5.2 [Reactive maintenance, inspection and testing](#),
- C.5.5.3 [Calibration](#).

The [organisation](#) shall:

- a) Ensure that personnel report [assets](#) that are defective or overdue for [maintenance, inspection, testing](#) or [calibration](#) as per section 0 [Reactive investigation – Events](#).
- b) [Segregate](#) or restrict [access](#) to [infrastructure](#), plant and equipment that is defective or undergoing [maintenance, inspection, testing](#) or [calibration](#),
- c) Ensure written instructions are [defined](#) and approved for internal [maintenance, inspection, testing](#) and [calibration](#) as per section C.4.2.2 [Internal documents](#).
- d) Ensure that [assets](#) are not modified where this will invalidate warranties or [supplier risk assessments](#) and that changes are [managed](#) as per section 0 [Change](#).
- e) Ensure internal [maintenance, inspection](#) and [testing](#) is conducted by [competent](#) personnel as per section C.2.4.4 [Competence](#).
- f) [Maintain maintenance, inspection, test](#) and [calibration records](#) as per section C.4.2.9 [Records](#).
- g) Ensure that hired [asset maintenance, inspection](#) and [test requirements](#) are [communicated](#), understood, complied with and [records](#) are retained – refer to section C.4.2.9 [Records](#).

#### C.5.5.1. Proactive maintenance, inspection and testing

[∞](#) The [organisation](#) shall:

- a) [Maintain](#) a [schedule](#) of identified [maintenance, inspection, testing](#) and [calibration](#) relating to its [assets](#), and other [assets](#) for which it is [responsible](#), compliant with its [policy](#) and [objectives](#) and informed by the [requirements](#) of [manufacturers](#), legislation, standards, [risk](#) assessment and [reactive investigation data](#) – refer to sections C.1.3 [Policy statement](#), C.1.4 [Objectives](#), C.1.5 [Legislation and standards](#), C.1.6 [Prospect and risk assessment](#) and 0 [Reactive investigation – Events](#).
- b) Schedule [planned asset maintenance, inspection, testing](#) and [calibration requirements](#) using a [database](#).
- c) [Contracted maintenance, inspection, testing](#) and [calibration](#) are conducted by approved [suppliers](#) as per section 0 [Suppliers](#).
- d) If appropriate, schedule remedial [action](#) or otherwise dispose of item as per sections C.9.2 [Corrective and preventive action](#) and C.5.6 [Waste and emissions](#).

#### C.5.5.2. Reactive maintenance, inspection and testing

[∞](#) The [organisation](#) shall [define arrangements](#) for the timely conduct of [reactive maintenance, inspection](#) and [testing](#) following the [identification](#) of defects during [reactive investigation](#) – refer to sections 0 [Reactive investigation – Events](#) and C.9.2 [Corrective and preventive action](#).

#### C.5.5.3. Calibration

[∞](#) The [organisation](#) shall:

- a) Ensure internal [calibration](#) is conducted according to a formally [defined process](#) and covers, [as applicable](#):
  - [Identification](#) of the type of equipment to be [calibrated](#),
  - [Maintenance](#) of a [schedule](#) of equipment to be subjected to [calibration](#) – refer to C.4.2.1 [Databases](#),
  - [Identification](#) of the [calibration](#) standard to be used,
  - Use of currently [calibrated](#) reference standards,
  - Tolerances and acceptance [criteria](#),
  - [Environmental conditions](#),
  - Special precautions,

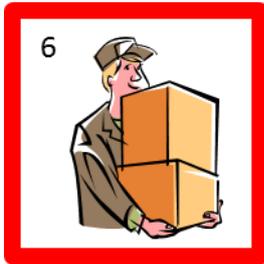
- Guidance on cumulative effect of errors in the [calibration](#) chain,
  - The sealing of adjustment devices to preserve [integrity](#),
  - Recording of the 'as found' errors before adjustment and the final [calibration](#) figures.
- b) Ensure equipment is labelled with [test/calibration](#) validity date compliant with section C.4.4 [Conventions](#).
- c) Where applicable, ensure [calibration correction](#) factor information is made [available](#) where the device is being used.

### **C.5.6. Waste and emissions**

∞ The [organisation](#) shall:

- a) [Design](#) and [operate processes](#) to minimise [waste](#) using a [waste controls hierarchy](#) – refer to sections C.1 [Assessment and Development of Controls](#) and 0 [Review and Action](#).
- b) [Identify](#) and attempt to minimise the volume and toxicity of [waste](#) generation and designate areas for storage.
- c) [Segregate](#) generated [waste](#), designate areas for storage and dispose of [waste](#) streams according to local [waste](#) collection [requirements](#), transport and recycling [arrangements](#).
- d) [Maintain required](#) licence(s) to cover [wastes likely](#) to be disposed of or processed within the scope of [organisation's operations](#).
- e) Use approved [suppliers](#) for transporting and [processing waste](#) as per section 0 [Suppliers](#), unless [managed](#) internally.
- f) Transport [waste](#) in enclosed or [securely](#) sheeted vehicles appropriate to the type of [waste](#).
- g) Ensure that waste containing [data](#) is treated appropriate to its [classification](#) – refer to section C.1.6.2 [Classification of structures and processes](#),
- h) [Maintain records](#) of amount and type of [waste](#) removed appropriate to legislation and [contractual requirements](#) – refer to sections C.1.5 [Legislation and standards](#), C.3.3 [Contracts](#) and C.4.2.9 [Records](#).
- i) Monitor [waste management](#) as per section 0 [Planned monitoring](#).

## C.6. Suppliers



∞ The [organisation](#) shall formally [define arrangements](#) for controlling and guiding the [management](#) of [suppliers](#) including:

- C.6.1 [Classification and vetting](#)
- C.6.2 [Specification and ordering](#)
- C.6.3 [Receipt](#)
- C.6.4 [Performance evaluation.](#)

The [organisation](#) shall ensure that [suppliers](#) are capable of and deliver [goods](#) and [services](#) compliant with its [policy](#), [strategic plan](#), [objectives](#), legislation and [contracts](#) – refer to sections C.1 [Assessment and Development of Controls](#), C.3.3 [Contracts](#) and 0 [Planned monitoring](#).

Suppliers supporting [projects](#) shall comply with appropriate [requirements](#) of section C.7.1.5 [Projects](#).

Interaction with [suppliers](#) shall comply with section C.2.5 [Interactions](#).

The [organisation](#), shall within its [sphere of influence](#) promote [commercial responsibility](#) within its [supply chain](#). [S]

The [organisation, as applicable](#), shall engage in [social dialogue](#) with its [suppliers](#) and within its [sphere of influence](#) promote [social responsibility](#) in its [supply chain](#). [G]

Some of the [arrangements](#) may be [covert](#), as necessary – refer to section A.4 [Covert management arrangements](#).

### C.6.1. Classification, vetting and control

∞ The [organisation](#) shall:

- a) [Maintain definitions](#) for [classifying](#) internal and external [suppliers](#) according to the potential to [impact](#) the [organisation's performance](#) as judged by its [stakeholders](#) as per section C.1.6.2 [Classification of structures and processes](#), [≠μ]
- b) [Record](#) its [suppliers](#) and their key details within a [database](#) as per section C.4.2.1 [Databases](#),
- c) Assess the potential [impact](#) that [suppliers](#) may have on the [organisation's performance](#) and [classify](#) them,
- d) Unless the [data](#) is otherwise [available](#), request critical [suppliers](#) to supply [data](#) demonstrating their [management arrangements](#) to deliver [goods](#) and/or [services](#) compliant with the [organisation's policy](#) and [objectives](#) – refer to sections C.1.3 [Policy statement](#) and C.1.4 [Objectives](#),
- e) [As applicable](#) request [organisations](#) to supply [data](#) regarding their:
  - Potential conflicts of interest,
  - [Commercial responsibility policy](#), [S]
  - [Social responsibility policy](#), [G]
- f) Conduct a level of [due diligence](#) informed by the potential [prospect and risk](#) of making the [organisation](#) an approved supplier,
- g) Assess [suppliers classified](#) as critical and approve those satisfying [requirements](#),
- h) Apply [management control](#) to [suppliers](#) according to their criticality [classification](#), [performance](#) history and [goods](#) and/or [services](#) currently being supplied – see also section C.6.4 [Performance evaluation](#),

- i) Ensure [suppliers](#) of [calibration](#) and testing [services](#) have accreditation to relevant standard(s) – refer to section C.5.5.3 [Calibration](#),
- j) Ensure [suppliers, as applicable](#), have sector specific accreditations [required](#) by [stakeholders](#),
- k) Schedule [inspections](#) and [audits](#) of [suppliers](#) of [goods](#) and [services, as appropriate](#), to provide suitable and sufficient [data](#) to enable evaluation of [suppliers](#) and subcontractor [performance](#) against [predefined criteria](#) – refer to sections 0 [Planned monitoring](#). And C.6.4 [Performance evaluation](#),
- l) Ensure that sufficient approved [suppliers](#) are [available](#) to provide [redundancy, diversity](#) and [segregation](#) informed by [prospect and risk assessment](#) – refer to section C.1.6 [Prospect and risk assessment](#),
- m) [Maintain records](#) of evidence to justify approval and use made of all critical [suppliers](#) as per section C.4.2.9 [Records](#),
- n) [Audit](#) or [inspect](#) critical [suppliers](#) if evidence is insufficient to provide sufficient confidence in the [goods](#) and/or the [services](#) being supplied as per section 0 [Planned monitoring](#).

### C.6.2. Specification and ordering

∞ The [organisation](#) shall:

- a) Prepare specifications prior to ordering which are, depending on the significance of the [goods](#) or [services](#):
  - Compliant with the [organisation's contracts policy](#) – refer to section C.3.3 [Contracts](#),
  - Based on an [analysis](#) of the needs of the [organisation](#) and relevant [stakeholders](#),
  - [Prospect and risk based](#) or [prospect and risk informed](#),
  - Take account of [management](#) of change [processes as applicable](#) – refer to section 0 [Change](#),
  - Compliant with and promotes the [organisation's strategic plan, policy](#) and [objectives](#) – refer to sections C.1.2 [Strategic plan](#), C.1.3 [Policy statement](#) and C.1.4 [Objectives](#),
- b) [Identify](#) and specify the [requirements](#) for the [good](#) and/or the [service](#) to be purchased and [determine](#) the class of [supplier required](#) – refer to section C.6.1 [Classification and vetting](#),
- c) [Review](#) and approve technical content of orders,
- d) If applicable, ensure that goods comply with the [organisation's schedule](#) of approved plant and equipment – refer to section C.5.4.3 [Plant and equipment](#),
- e) Where [required](#) by [customer](#) or other [stakeholder](#), obtain approval to use [supplier](#) and the [good](#) or [service](#),
- f) Obtain quotations, evaluate them, ensure they comply with budgetary control and place order compliant with section C.3.3 [Contracts](#),
- g) As far as reasonably [practicable](#) within the limitations of [quality, prospect, risk](#) and [commercial viability](#) give a strong preference to placing orders with:
  - [Commercially responsible](#) suppliers, [\[S\]](#)
  - Local and [socially responsible suppliers](#). [\[G\]](#)

### C.6.3. Receipt

∞ Following receipt of [goods](#) and/or [services](#) the [organisation](#) shall confirm:

- a) The [condition](#) and quantity of delivered [goods](#),
- b) The functionality of [goods, as applicable](#),
- c) The delivered [goods](#) and [data reconcile](#) with the purchase specification and delivery [documents](#),
- d) That the supplied [goods](#) meets or has met the [required](#) specification and is or was fit for [purpose](#),

- e) Conduct a level of [due diligence](#) for delivered critical goods, informed by the potential [risk](#) that it could be counterfeit or otherwise lacking in the [required quality](#),
- f) That the [supplier's commercial](#) obligations have been met such that there is no impediment preventing payment – refer to section C.3.4.2 [Payments](#).
- g) [Significant](#) problems with [goods](#) receipt reconciliation or [quality](#) have been [managed](#) as per section C.9.2 [Corrective and preventive action](#).

[Documents](#) received with [goods](#) which are [significant](#) to its handling, [operation](#), [maintenance](#), [condition](#) or other [aspects](#) shall be [managed](#) as per section C.4.2.3 [External documents](#).

The [organisation](#) shall [investigate significant events](#) during or following receiving [goods](#) or [services](#) as per section C.10.1 [Internal reactive investigation](#).

Monitor the [condition](#) and [performance](#) of received [goods](#) and [services](#), [as appropriate](#), as per section 0 [Planned monitoring](#).

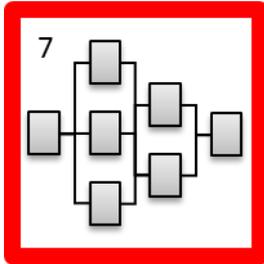
See also section C.5.2.1 [Receipt](#).

#### **C.6.4. Performance evaluation**

∞ The [organisation](#) shall:

- a) Monitor [suppliers](#) as per [defined](#) controls – refer to sections C.6.1 [Classification, vetting and control](#) and C.6.3 [Receipt](#),
- b) [Review supplier performance](#) via [performance data](#) – refer to sections and 0 [Planned monitoring](#),
- c) [Review](#) and grade the overall [performance](#) of [significant suppliers](#) against [defined criteria](#).
- d) Feed [performance](#) assessments back to key [suppliers](#) – refer to section C.1.1 [Foundation planning](#).
- e) Update the [supplier database](#) with latest [supplier performance data](#)/grades.
- f) Feed [supplier performance](#) into [management review](#) and [action](#) – refer to section C.12.1 [Review scheduling](#).

## C.7. Normal Structures and Processes



∞ The [organisation](#) shall formally [define arrangements](#) for controlling and guiding the [management](#) of internal and external [structures](#) and [processes](#) (including [goods](#) and [services](#) delivery) and cover:

C.7.1 [Structure and process design](#)

C.7.2 [Process implementation](#)

C.7.3 [Structure and process cessation](#)

The [organisation](#) shall ensure that [structures](#), [processes](#) (including [goods](#) and [services](#)) is compliant with its [policy](#), [strategic plan](#), [objectives](#) and legislation – refer to sections C.1 [Assessment and Development of Controls](#).

[Structures](#) and [processes](#) should be appropriately [classified](#) as per section C.1.6.1 [Prospect and risk assessment planning](#) and appropriate [design](#) and implementation [management control](#) applied.

[Structures](#) and [processes](#) shall be [validated](#) as per section C.1.7 [Performance justification](#), where [required](#) by [stakeholders](#).

Some of the [arrangements](#) may be [covert](#), as necessary – refer to section A.4 [Covert management arrangements](#).

### C.7.1. Structure and process design and development

∞ The [organisation](#) and [projects](#) shall:

- a) [Define](#) their principal [structures](#) and [processes](#) (including [goods](#) and [services](#)) and their interactions as per section C.1.1 [Foundation planning](#) and assign [responsibilities](#) as per section C.2.2 [Responsibilities and authorities](#).
- b) [Define](#) the [requirements](#) for [structures](#) and [processes](#),
- c) Ensure [structures](#) and [processes](#) discourage and resist corruption and fraud – refer to section C.1.3 [Policy statement](#).

[Processes](#) shall cover [plan, do, check and act](#) activities and the [requirements](#) of the following sections shall be taken into account in [designing strategic, tactical](#) and [operational structures](#) and [processes](#):

- C.1 [Prospect and risk assessment](#)
- 0 [Personnel](#)
- 0 [Commerce](#)
- 0 [Data](#)
- 0 [Matter and Energy](#)
- 0 [Suppliers](#)

[Structure](#) and [process design](#) and development [processes](#) shall be [managed](#) as [projects](#) – refer to section C.7.1.5 [Projects](#).

[Design](#) change shall comply with section 0 [Change](#).

### C.7.1.1. Structure and process definition

∞ The designated [responsible](#) persons shall establish and [maintain structure](#) and [process](#) (including [goods](#) and [services](#)) [definitions](#) and [manage](#) their improvement and where necessary change them according to section C.9.4 [Structure and process change](#).

[Structure and process definitions](#) shall be [communicated](#) to relevant [stakeholders](#), [as applicable](#), as per section C.2.5.2 [Communication, consultation, participation and reporting](#) and as [required](#) by [contracts](#) – refer to section C.3.3 [Contracts](#).

[Structure and process definitions](#) shall take account of the complexity and potential of [structures](#) and [processes](#) to [impact stakeholder needs](#) and [expectations](#) and be [defined](#) in sufficient detail to permit their [effective](#) and [efficient analysis](#), implementation, control, [monitoring](#), [review](#) and improvement and include or address for the [significant](#) life of the [structure](#) or [process](#), [as applicable](#):

- a) Description of the [purpose](#) and the [required goods](#) and/or [services quality](#) to be delivered and [goods and/or service capability](#) – see also section C.3.2 [Marketing](#),
- b) [Requirements](#) specified by [customer](#) or other [stakeholders](#) plus any other known [requirements](#) related to the specified or intended [purpose](#) of the [structure](#) or [process](#) e.g. [requirements](#) for [traceability](#), preservation, delivery and post-delivery, and [goods and/or service capability](#) – refer to sections C.3.3 [Contracts](#), C.11.6 [Survey and benchmarking](#).
- c) A demonstration of how [value](#) is [created](#) with respect to [objectives](#) and [stakeholder needs](#) and [expectations](#) – refer to section C.1.7 [Performance justification](#),
- d) [Design principles](#) including their synergy and conflicts with respect to [effectiveness](#), [efficiency](#), [innovation](#), [robustness](#), [agility](#), [resilience](#), reliability, [availability](#), [operability](#) and maintainability,
- e) Modes of [success](#) and failure,
- f) Permitted [configuration\(s\)](#),
- g) [Conventions](#) – refer to section C.4.4 [Conventions](#),
- h) [Requirements](#) for [traceability](#) of [structure](#) and [process](#) materials and components – refer to section C.4.4 [Conventions](#),
- i) Controls to achieve care of [stakeholder assets](#) – refer to C.3.3 [Contracts](#),
- j) Controls to [maintain conformity](#) of [process](#) outputs during storage and/or delivery to the intended destination,
- k) [Principles](#) and controls to provide resistance to malevolent theft of or degradation of the [structure](#) and/or [process](#) ([structure](#) and [process security](#)),
- l) [Life cycle](#) of delivered [good](#) or [service](#) and [life cycle](#) of delivery [system](#) ([structure](#)) from inception to decommissioning and disposal,
- m) [Safe](#) and [healthy](#) human and [environmental](#) interaction with [structure](#) and [process](#) ([manufacture](#), construction, commissioning, [operation](#), [maintenance](#), decommissioning, demolition/destruction etc.),
- n) A [schedule](#) of generic and specific rules governing decisions and transformations within the [process](#) including [actions](#) when specific [conditions](#) occur during [processes](#),
- o) [Process](#) inputs and outputs, and specific [requirements](#),
- p) Best use of [resources](#) including [waste](#) and [emissions](#) – refer to section C.5.6 [Waste and emissions](#),
- q) Selection and combination of materials and energy as per section C.5.1 [Selection and combination](#),
- r) Dependency and interdependency of interfacing [structures](#) (including substructures) and processes (including sub-[processes](#)),
- s) Triggers that initiate transformation(s),

- t) [Process](#) parameters, their [measurement](#) and permitted variation – refer to section C.5.4.3.2 [Monitoring and measuring equipment](#),
- u) [Monitoring requirements](#) and [key performance indicators](#) – refer to section C.5.4.3.2 [Monitoring and measuring equipment](#),
- v) [Automatic process](#) and [manual process](#) control [aspects](#) including ergonomics and [need](#) for personal equipment – refer to section A [Personal equipment](#),
- w) Relevant [stakeholder needs](#) and [expectations](#), legislation and power to influence,
- x) [Verification](#) and [validation requirements](#),
- y) Direct and indirect interaction with [stakeholders](#) including [contracts](#),
- z) Personnel [requirements](#) including numbers, [competence](#) and control of [stressors](#),
- aa) [Analysis](#) and measures taken to minimize [human error](#) and [human violation](#),
- bb) Involvement of other [organisations](#) in supplying [significant goods](#) and [services](#) – refer to section 0 [Suppliers](#),
- cc) The contribution and/or [impact](#) on the work [environment](#) – refer to section C.5.4.2 [Work environment](#),
- dd) [Environment](#) and structure(s) [required](#) to host or support the [processes](#),
- ee) [Operability](#), maintainability, [maintenance](#), [inspections](#) and [test requirements](#),
- ff) Minimum recommended [planned monitoring requirements](#),
- gg) [Required goods](#) and [services](#) release, delivery and post-delivery controls.

[Structure and process definitions](#) shall cover the delivery and post-delivery of [goods](#) and [services](#) – refer to section C.3.3.4 [Post Contract](#).

[Structures](#) shall be [designed](#) to enhance the [organisation's](#) competitiveness and resist [harm](#) from [stakeholder](#) criminal or [unethical behaviours](#).

[Processes](#) shall be [designed](#) to be conducted with sufficient [transparency](#) to provide the [required stakeholder](#) levels of confidence within [covert requirements](#) – refer to section A.4 [Covert management arrangements](#).

[Structure and process definitions](#) shall be subject to appropriate [review](#) by relevant [stakeholders](#) and [expert](#) advisers and approved by the [structure and/or process owners](#) – refer to sections C.1.1 [Foundation planning](#), C.2.3 [Provision of expert advice and assistance](#) and C.2.2 [Responsibilities and authorities](#). [Structure and process definitions](#) shall be periodically [reviewed](#) as per section 0 [Review scheduling](#).

[Structure and process definitions](#) shall be [documented](#) in a form to enable its [effective](#) and [efficient](#) implementation, [review](#) and modification – refer to sections C.7.2 [Structure and process implementation](#), 0 [Review and Action](#) and 0 [Change](#).

#### **C.7.1.2. Repetitive and frequently conducted processes**

∞ Where appropriate, repetitive and frequently conducted [processes](#) shall employ [statistical process control](#) – refer to sections C.7.1.7 [Measurement](#) and C.4.3 [Processing](#).

Relevant [process performance data](#) shall be collected for lagging and [leading indicators](#) – refer to section C.4.3.2 [Indicators](#).

#### **C.7.1.3. Non-repetitive and infrequently conducted processes**

∞ [As applicable](#), non-repetitive and infrequently conducted [processes](#) shall be conducted according to a [documented procedure](#) or instruction – refer to section C.4.1 [Management system structure](#).

Relevant [process](#) element [performance data](#) shall be collected, as [practicable](#), for lagging and [leading indicators](#) – refer to sections C.4.3.2 [Indicators](#).

[Contingency processes](#) shall be [managed](#) as per section 0 [Contingencies](#).

#### C.7.1.4. Significant prospect and risk systems of work

∞ The [organisation](#) shall:

- a) [Identify significant prospects and risks](#) requiring special work controls as per section C.1 [Assessment and Development of Controls](#).
- b) [Maintain](#) formal ‘[systems of work](#)’ for [significant infrastructure](#), work [environment](#) and other relevant [prospects and risks](#) and [document](#) in work or [project documentation](#).
- c) Implement [systems of work](#) taking account of whether the [organisation](#) controls the work site/[infrastructure](#) or the [organisation](#) is working under a client or another contractor [systems of work](#).
- d) [Maintain records](#) of [systems of work](#) administrative [documentation](#) demonstrating the implementation of control of [processes](#) and its status and [maintain](#) as per section C.4.2.9 [Records](#). See also section C.5.4.4 [Configuration](#).

#### C.7.1.5. Projects

∞ The [organisation](#) shall ensure, as relevant, that [project management](#) includes:

- a) Clear [project purpose definition](#) and defining of the [organisation’s role](#) in the [project](#),
- b) Client and other [stakeholder requirements](#),
- c) Assessment and development of [management control](#) compliant with section C.1 [Assessment and Development of Controls](#),
- d) A [project organisation](#) under the control of an appointed [project](#) manager compliant with section 0 [Personnel](#),
- e) [Commercial requirements](#) and [management](#) compliant with section 0 [Commerce](#),
- f) [Data availability](#), input, output and [security requirements](#) at each [project](#) stage and [management](#) compliant with section 0 [Data](#),
- g) Matter and energy [requirements](#) and [management](#) compliant with the section 0 [Matter and Energy](#),
- h) [Supplier](#) and subcontractor [requirements](#) and [management](#) compliant with section 0 [Suppliers](#),
- i) [Project](#) implementation compliant with section **Error! Reference source not found.** [Normal Structures and Processes](#),
- j) [Contingency arrangements](#) compliant with section 0 [Contingencies](#) and subsection C.8.2.6 [Project contingency arrangements](#),
- k) Change [management](#) compliant with section 0 [Change](#),
- l) [Reactive investigation](#) compliant with section 0 [Reactive investigation – Events](#),
- m) [Planned monitoring](#) (including [suppliers](#)) compliant with section 0 [Planned monitoring](#),
- n) [Review](#) and [action](#) compliant with section 0 [Review and Action](#).

[Organisations](#) participating in or supplying [goods](#) and [services](#) to [projects](#) shall also satisfy these [requirements, as applicable](#) – refer to section 0 [Suppliers](#).

#### C.7.1.6. Goods and services design and development

∞ [Goods](#) and [services design](#) and development shall be [managed](#) as a [project](#) as per section C.7.1.5 [Projects](#).

[Goods](#) and [services design processes](#) shall comply with section C.7.1 [Structure and process design](#).

The [stakeholder requirements](#) for the [good](#) and [services](#) shall be specified prior to the commencement of the [design process](#) including [conventions](#) – refer to section C.4.4 [Conventions](#). Changes shall comply with section C.9.5 [Project change](#).

The principal [design](#) methodologies shall be specified and their [validation](#) demonstrated – refer to section C.1.8 [Management tools and techniques](#). [Design](#) input [data](#) shall be [verified](#) and [validated as appropriate](#) to the [design](#) methodology for which it is being used.

The [design](#) and development [process](#) shall include appropriate [continual prospect and risk assessment](#) covering the [good](#) and/or [services](#) lifecycle as per section C.1.6 [Prospect and risk assessment](#) and address the [impacts](#) of the [design](#) with respect to:

- a) The [organisation's strategy](#) and [policy](#) – refer to sections C.1.2 [Strategic plan](#) and C.1.3 [Policy statement](#).
- b) [Commercial contracts](#) – refer to section C.3.3 [Contracts](#).
- c) [Customer quality](#).
- d) Personnel [health](#) and [safety](#).
- e) The [environment](#).
- f) [Goods operability](#) and maintainability.

[Goods](#) and [services designs](#) shall be [validated](#) against [customer](#) and other [stakeholder requirements](#).

[Operation manuals](#) and [maintenance manuals](#) or similar [documents](#) shall be [created](#) or updated and [verified](#).

[Records](#) shall be retained as per section C.4.2.9 [Records](#).

#### **C.7.1.7. Measurement and testing**

∞ [Measuring](#) and [test](#) equipment shall be [verified](#) and/or [calibrated](#) as per section C.5.5.3 [Calibration](#).

[Measurement](#) and [testing](#) methodologies, where [required](#), shall be [validated](#) and justified as per section C.1.7 [Performance justification](#).

Where [required](#), [measurement](#) and [test data](#) shall be processed as per section C.4.3 [Processing](#).

[Measurement](#) and [testing](#) shall comply with [conventions](#) established under section C.4.4 [Conventions](#).

### **C.7.2. Structure and process implementation**

∞ [Structure and process definitions](#), [defined](#) in section C.7.1.1 [Structure and process definition](#), shall be implemented taking account of the applicable [MSS requirements](#) and outputs of sections:

- C.1 [Assessment and Development of Controls](#),
- 0 [Personnel](#),
- 0 [Commerce](#),
- 0 [Data](#),

- 0 [Matter and Energy](#),
- 0 [Suppliers](#),
- 0 [Contingencies](#),
- 0 [Reactive investigation](#),
- 0 [Planned monitoring](#),
- 0 [Review and Action](#).

[Structure and process owners](#) shall ensure that:

- a) [Resources](#) to achieve [planned goods](#) and [services](#) delivery are [determined](#) – refer to section C.3.3.3 [Contract implementation](#),
- b) Sufficient [resources](#) are made [available](#) to [manage](#) and conduct [processes](#) to satisfy [stakeholder requirements](#) within the limits of [goods and/or services delivery capability](#) ,
- c) [Responsibilities](#), [authorities](#) and [requirements](#) to achieve [good](#) and/or [service quality](#) have been [defined](#) and [communicated](#) as per sections C.2.2 [Responsibilities and authorities](#) and C.2.5.2 [Communication, consultation, participation and reporting](#),
- d) [Required data](#) is controlled and [available](#) where it is [required](#) – refer to section C.4.2 [Control](#),
- e) [Processes](#) are compliant with their [process definition](#) as per section C.7.1.1 [Structure and process definition](#),
- f) [Goods](#) and [services](#) are not released to a [customer](#) until the [planned conformity verification arrangements](#) have been satisfactorily completed, unless otherwise approved by the [organisation’s responsible](#) manager and, where applicable, by the [customer](#) or other relevant stakeholder(s).
- g) [Documented](#) information shall indicate the person(s) authorizing release of [goods](#) and [services](#) for delivery to the [customer](#).
- h) [Processes](#) are suitably and sufficiently [monitored](#) as per section 0 [Reactive investigation](#) and 0 [Planned monitoring](#). To ensure compliance and the generation of improvement suggestions implemented via change as per sections 0 [Review and Action](#) and 0 [Change](#),
- i) [Records](#) are generated to demonstrate compliance with the [structure and process definition](#) – refer to sections C.4.2.9 [Records](#) and C.7.1.1 [Structure and process definition](#).

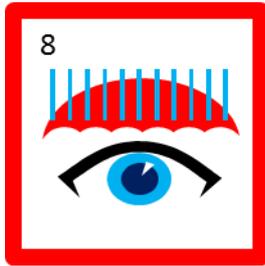
### C.7.3. Structure and process cessation

∞ The cessation of [structures](#) and [processes](#) shall:

- a) Be appropriately [planned](#) and implemented based on or informed by [prospect and risk assessment](#) taking account of [customer](#) and other [stakeholder needs](#) and [expectations](#), and the [structure and process definition\(s\)](#) – refer to sections C.1 [Assessment and Development of Controls](#) and C.7.1.5 [Structure and process definition](#),
- b) Take account of the [commercial impacts](#) on [customers](#), [suppliers](#) and other [commercial participants \[S\]](#),
- c) Take account of the social [impacts \[G\]](#),
- d) Make the best use of [resources](#) including their reuse, redeployment and minimization of [waste](#),
- e) [Managed](#) as a [project, as appropriate](#) – refer to section C.7.1.5 [Projects](#),
- f) Ensure that waste is managed as per section C.5.6 [Waste and emissions](#).

[Structures](#) and [processes](#) requiring unscheduled cessation due to defects or other reasons shall be [managed](#) as per section 0 [Contingency Structures and Processes](#).

## C.8. Contingency Structures and Processes



- ∞ The [organisation](#) shall formally [define arrangements](#) for controlling and guiding the [management](#) of [contingency processes](#) covering:
- C.8.1 [Contingency planning](#)
  - C.8.2 [Organisation contingency arrangements](#)
  - C.8.2.6 [Project contingency arrangements](#)
  - C.8.3 [Contingency arrangements testing](#)
  - C.8.4 [Contingency arrangements training](#)
  - C.8.5 [Contingency events](#).

The [organisation](#) shall ensure that [contingency management](#) is compliant with its [policy](#), [strategic plan](#), [objectives](#) and legislation and take account of the [needs](#) and [expectations](#) of [stakeholders](#) who may be [impacted](#) by or may be [required](#) to participate in the [arrangements](#) – refer to sections C.1 [Assessment and Development of Controls](#).

[Contingency structures](#) and [processes](#) shall comply with the relevant [requirements](#) of section **Error! Reference source not found.** [Normal Structures and Processes](#).

[Structures](#) and [processes](#) shall be [validated](#) as per section C.1.7 [Performance justification](#), where [required](#) by [stakeholders](#).

The [arrangements](#) may be [covert](#), as necessary – refer to section A.4 [Covert management arrangements](#).

### C.8.1. Contingency planning

∞ The [organisation](#) shall [identify](#) its [needs](#) for formal [contingency arrangements](#) based on the [processes required](#) by section C.1 [Assessment and Development of Controls](#), to [mitigate risks](#) following or during an [event](#) and maintain continuity of its functionality and [availability](#) to deliver its [purpose](#).

The [organisation](#) shall:

- a) [Identify](#) the [need](#) for general and [project contingency arrangements](#) capable of mitigating potential losses following an undesired [event](#) based on applicable legislation and [prospect and risk assessments](#) covered in sections C.1.5 [Legislation and standards](#) and C.1.6 [Prospect and risk assessment](#).
- b) Develop [contingency management arrangements](#), [as applicable](#), covering:
  - [Emergencies](#) including first aid,
  - [Crises, \[S\]](#)
  - [Disaster recovery, \[S\]](#)
  - [Processes](#) intentionally halted by personnel because of perceived problems – see also C.2.2 [Responsibilities and authorities](#),
  - Breach of [security](#),
  - [Goods](#) and [services](#) defect notification and [goods](#) recall,
- c) Ensure that [contingency plans](#) consider, [as applicable](#):
  - [Responsibility](#) for command and control,

- Establishing a [safe](#) or stable situation,
- Internal and external [communication](#),
- [Contingency](#) specific [resources](#) and the minimum [required](#) to [operate contingency processes](#) – refer to **Error! Reference source not found.** [Organisation](#) ,
- Recovery to normal [conditions](#) and [processes](#),
- Preservation of evidence,
- [Stakeholder](#) specific [requirements](#) including legal compliance.

## C.8.2. Contingency arrangements implementation

∞ The [organisation](#) shall:

- a) Implement [planned contingency arrangements](#).
- b) [Maintain](#) sufficient [resources](#) to implement [contingency arrangements](#) with respect to:
  - Number of [competent](#) personnel – refer to section 0 [Personnel](#),
  - [Commercial contracts](#) – refer to section 0 [Commerce](#),
  - [Data](#) – refer to section 0 [Data](#),
  - Matter and energy – refer to section 0 [Matter and Energy](#),
  - [Suppliers](#) – refer to section 0 [Suppliers](#).

### C.8.2.1. Nonconformities

∞ Identified [nonconforming structure](#) shall be:

- a) Identified and [systematically recorded](#) and include a description of the nature of nonconformities and any subsequent [actions](#) taken, including concessions obtained, and determining if similar [nonconformities](#) exist, or could potentially occur – refer to sections 0 [Reactive investigation – Events](#), 0 [Planned Monitoring](#) and C.4.2.9 [Records](#),
- b) Marked as [nonconforming](#), [segregate](#) and/or [secured](#) from conforming [structure](#), [as appropriate](#) to the significance of the [nonconformity](#) and its [effective](#) and [efficient](#) control and to minimize the [impact](#) on the normal functioning of [structures](#) and [processes](#),
- c) Subjected to [prospect and risk analysis](#), [corrective action](#) and preventive [action, as appropriate](#) to the significance of the [nonconformity](#) – refer to sections C.1.6 [Prospect and risk assessment](#) C.9.2 [Corrective and preventive action](#),
- d) Subjected to re-[verification](#) if corrected to demonstrate [conformity](#) to the [requirements](#).

### C.8.2.2. Emergencies, Crises and Disaster Recovery

∞ The [organisation](#) shall [maintain](#) appropriate [emergency](#), [crisis](#) and [disaster recovery](#) preparedness and response [plans](#) based on or informed by [prospect and risk assessments](#) and relevant [stakeholder requirements](#). The preparedness and response [structures](#) and [processes](#) shall endeavour to [mitigate risk](#) and attempt to restore [normal processes](#) whilst addressing the [organisation's](#) and its [stakeholder's needs](#) and [expectations](#) including those relating to [safety](#), [health](#) and the [environment](#).

Preparedness and response shall address:

- a) Personnel [structures](#) and [processes](#) including internal and external coordination, cooperation and [competence](#), and provision of [expert](#) advice – refer to sections 0 [Personnel](#) and C.8.4 [Contingency arrangements training](#),
- b) [Commercial arrangements](#) to ensure [availability](#) of [resources](#) – refer to section 0 [Commerce](#),
- c) [Data requirements](#) including instruction and guidance [documents](#), control, [processing](#), transmission and recovery – refer to section 0 [Data](#),

- d) Access to [data requirements](#),
- e) Matter and energy [requirements](#) including [safeguarding](#) and maintaining [operation](#) of essential [structures](#) and [processes](#) – refer to section 0 [Matter and Energy](#),
- f) Designated location(s) for the [management](#) and other key personnel,
- g) Provision and [operation](#) of [emergency](#), protective and [measuring](#) equipment C.5.4.3 [Plant and equipment](#),
- h) Coordination, cooperation and [competence](#) of [suppliers goods](#) and [services](#) – refer to sections 0 [Suppliers](#), and C.3.3 [Contracts](#),
- i) Coordination, cooperation and interaction with [significant stakeholders](#) – refer to sections C.1.1.1 [Foundation planning](#) and C.2.5.1 [Interactions](#),
- j) Periodic [testing](#) as per section C.8.3 [Contingency arrangements testing](#),
- k) [Review](#), [continual](#) improvement and alignment with [stakeholder needs](#) and [expectations](#) as per section 0 [Review and Action](#).

### C.8.2.3. Intentionally halted processes

∞ The [organisation](#) shall [maintain](#) formal [arrangements](#):

- a) Permitting personnel to halt [processes](#) when there are legitimate concerns about [good](#) or [service quality](#), [health](#), [safety](#), [environmental](#) or [security](#) issues,
- b) Resolving any disagreements or conflict and re-establishing normal or changed [processes](#).

See also section C.2.5.3 [Management of conflict](#).

### C.8.2.4. Defect notification and recall

∞ The [organisation](#) shall [maintain arrangements](#) for notifying [customers](#) and relevant stakeholders, and where appropriate taking any necessary [corrective action](#) or compensatory [actions](#) following the internal or external revelation of:

- a) A [significantly](#) defective [good](#),
- b) A delivered [process](#) that was defective.

See also section C.2.5.2.2 [External communication, consultation, participation and reporting](#).

### C.8.2.5. Insurance

∞ The [organisation](#) shall [maintain](#) insurance sufficient to [mitigate significant risks](#), be compliant with legislation and to satisfy other [stakeholder requirements](#).

### C.8.2.6. Project contingency arrangements

∞ The [organisation](#) shall:

- a) Implement formal [contingency arrangements](#) and [plans](#) appropriate to the significance of the [project](#) and its potential to [impact](#) on [stakeholder needs](#) and [expectations](#),
- b) Ensure that relevant parts of [contingency arrangements](#) are briefed to [project](#) personnel during induction and are [accessible](#) for reference – refer to section C.2.5.2 [Communication, consultation, participation and reporting](#),
- c) [Identify project nonconforming structures](#) and [manage](#) them according to section C.8.2.1 [Nonconformity](#).

## C.8.3. Contingency arrangements testing

∞ The [organisation](#) shall:

- a) [Test](#) all [contingency arrangements](#), as reasonably practical, to a degree sufficient to establish initial and on-going confidence in their [effectiveness](#) and [efficiency](#).
- b) Hold a post-[testing](#) meeting to [review](#) the [performance](#) of the [arrangements](#).
- c) Produce a report or [record](#) containing suggestions for improvement – refer to section 0 [Change](#).

#### **C.8.4. Contingency arrangements training**

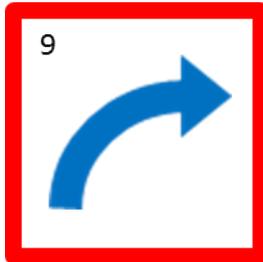
∞ The [organisation](#) shall provide [contingency process training](#) and periodic practice – refer to sections C.2.4.4 [Competence](#) and C.2.5.2 [Communication, consultation, participation and reporting](#).

#### **C.8.5. Event response**

∞ The [organisation](#) shall, as relevant:

- a) Follow formal [arrangements](#) when responding to [events](#) – refer to section C.4.1 [Management system structure](#) and C.8.2.2 [Emergencies, Crises and Disaster Recovery](#),
- b) Endeavour to [safeguard](#) life, the [environment](#) and [assets](#),
- c) Preserve evidence – refer to section C.10.1.1 [Evidence preservation](#),
- d) Notify relevant personnel and bodies without delay – refer to section C.2.5.2 [Communication, consultation, participation and reporting](#).
- e) [Record event](#) details – refer to section C.4.2.9 [Records](#),
- f) [Analyse](#) immediate and [root causes](#) as per section C.10.1.3 [Investigation and analysis of root causes](#),
- g) [Create](#) an [event](#) report(s) and where [required](#) circulate to regulatory bodies and other [stakeholders](#) as per section C.2.5.2.2 [External communication, consultation, participation and reporting](#),
- h) Schedule a timely [management review](#) depending on the seriousness of the [event](#) – refer to 0 [Review scheduling](#),
- i) Brief personnel on relevant internal and external [events](#) and the lessons to be learned – refer to section C.2.5.2.1 [Internal communication, consultation, participation and reporting](#).

## C.9. Change



∞ The [organisation](#) shall formally define [arrangements](#) for controlling and guiding the [management](#) of various forms of change covering:

- C.9.1 [Change management lifecycle](#)
- C.9.2 [Corrective and preventive action](#)
- C.9.3 [Strategic and tactical change](#)
- C.9.4 [Operational structure and process change](#)
- C.9.5 [Project change](#)

C.9.6 [Management system change.](#)

The [organisation](#) shall ensure that:

- a) The [management](#) of [significant](#) changes is compliant with its policy, [strategic plan](#), [objectives](#) and legislation – refer to sections C.1 [Assessment and Development of Controls](#),
- b) Proposed change is appropriately [classified](#) and [management control](#) applied depending on the potential for gain and loss – refer to section C.1.6.1 [Prospect and risk assessment planning](#),
- c) That the [management](#) of change forms part of [management review](#) and [action](#) – refer to section 0 [Review and Action](#),
- d) Change [processes](#) are [recorded](#) – refer to section C.4.2.9 [Records](#).

[Structures](#) and [processes](#) shall be [validated](#) as per section C.1.7 [Performance justification](#), where [required](#) by [stakeholders](#).

Some [arrangements](#) may be [covert](#), as necessary – refer to section A.4 [Covert management arrangements](#).

### C.9.1. Change management life cycle

∞ For all [significant organisation](#) and [project](#) temporary and permanent change the [organisation](#) shall:

- a) [Define](#) the change lifecycle's key stages and the [management control](#) for [managing](#) all types of change from conception to completion,
- b) Establish [arrangements](#) for responding to [stakeholder](#) change suggestions – see sections C.2.2 [Responsibilities and authorities](#) and C.11.7 [Self-monitoring and vigilance](#),
- c) [Classify](#) change proposals according to potential to [impact performance](#) – refer to section **Error! Reference source not found.** [Prospect and risk assessment planning](#),
- d) Not implement any [significant](#) change without it first receiving approval via [management review](#) at an appropriate level – refer to section 0 [Review and Action](#),
- e) [Maintain databases](#) and [records](#) demonstrating the status and progress of [significant](#) temporary and permanent changes – refer to sections C.4.2.1 [Databases](#) and C.4.2.9 [Records](#),
- f) Feed change progress and [performance](#) into the [management review process](#) – refer to section 0 [Review and Action](#),
- g) Consult with, [as appropriate](#), and take account of [stakeholder](#) general and [contractual requirements](#) – refer to sections C.1.1 [Foundation planning](#), C.2.5.2 [Communication, consultation, participation and reporting](#) and C.3.3 [Contracts](#),
- h) [Monitor](#) and [review](#) the [effectiveness](#) of changes to [structures](#) and [processes](#) – refer to sections C.11.1 [Monitoring planning](#) and 0 [Review and Action](#).

## C.9.2. Corrective and preventive action

∞ The [organisation](#) shall:

- a) Report all [significant conditions](#) requiring [corrective actions](#) identified via [reactive investigation](#) or [planned monitoring](#) or [management review](#) as per sections C.2.5.2 [Communication, consultation, participation and reporting](#), C.8.2.1 [Nonconformities](#), 0 [Reactive investigation – Events](#), 0 [Planned monitoring](#). And 0 [Review and Action](#),
- b) Notify relevant [stakeholders](#) of [significant](#) nonconformities – refer to section C.2.5.2 [Communication, consultation, participation and reporting](#),
- c) Ensure that [goods](#) and [services](#) which do not conform to [requirements](#) are controlled to prevent their unintended use or delivery that will have a negative [impact](#) on [customers](#) or other [stakeholders](#),
- d) Correct nonconformities,
- e) [Investigate](#) the immediate and [root causes](#) of a [nonconformity](#) or negative [event](#), including relevant [prospect and risk assessments](#) and endeavour to avoid or reduce applicable [risks](#) – refer to C.1.6 [Prospect and risk assessment](#),
- f) [Review](#) the [effectiveness](#) of any [corrective action](#) taken,
- g) Make changes to the [management system](#), if necessary – refer to section C.9.6 [Management system change](#).

## C.9.3. Strategic and tactical change

∞ The [top management](#) of the [organisation](#) shall control [strategic](#) change informed by [prospect and risk assessment](#) as per section C.1.6 [Prospect and risk assessment](#).

[Strategic](#) change [arrangements](#) shall cover change of the [strategic plan](#) and [policy](#) – refer to sections C.1.2 [Strategic plan](#) and C.1.3 [Policy statement](#).

[Tactical](#) change shall comply with the [organisation's strategic plan](#) and the [policy statement](#) – refer to sections C.1.2 [Strategic plan](#) and C.1.3 [Policy statement](#).

## C.9.4. Operational structure and process change

∞ The [organisation](#) shall control [operational structure](#) and [process](#) (including [goods](#) and [services](#)) change [informed by](#) or [based on prospect and risk assessment](#) as per section C.1.6 [Prospect and risk assessment](#).

[Structure](#) shall be suitably marked to indicate the change that has occurred – refer to section C.4.4 [Conventions](#).

[Data systems](#) shall be updated so that they reflect the current condition, status and the change that has been implemented to ensure continuity and accuracy of [explicit knowledge](#) – refer to section C.4.2 [Control](#).

## C.9.5. Project change

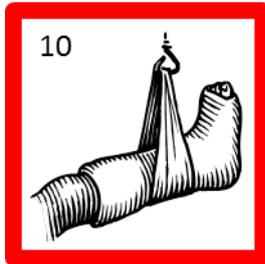
∞ [Significant project](#) changes shall be subject to [management control](#) that is [prospect and risk based](#) or [prospect and risk informed](#), [as appropriate](#), as per sections C.1.6 [Prospect and risk assessment](#) and C.9.1 [Change management lifecycle](#).



### **C.9.6. Management system change**

∞ The [organisation](#) shall establish [arrangements](#) for controlling permanent and temporary changes to its [management system](#) compliant with section 0 [Data](#).

## C.10. Reactive Investigation



∞ The [organisation](#) shall formally [define arrangements](#) for controlling and guiding the [management](#) of internal and external [reactive investigation](#) that may have negative and positive [impacts](#) and cover:

C.10.1 [Internal reactive investigation](#)

C.10.2 [External reactive investigation](#)

The [organisation](#) shall ensure that [reactive investigation](#) is compliant with its [policy](#), [strategic plan](#), [objectives](#) and legislation – refer to sections C.1 [Assessment and Development of Controls](#).

[Reactive investigation](#) shall, [as applicable](#):

- a) Cover [commercially responsibility](#) performance, [\[S\]](#)
- b) Cover [social responsibility](#) performance, [\[G\]](#)
- c) Contribute to the generation of [indicators](#) as per section C.4.3.2 [Indicators](#).

Personnel involved in the [reactive investigation](#) of [events](#) shall consider [opportunities](#) to improve [planned monitoring](#) – refer to section 0 [Monitoring planning](#).

Some of the [arrangements](#) may be [covert](#), as necessary – refer to section A.4 [Covert management arrangements](#). [Reactive investigation covert arrangements](#) shall have an appropriate degree of separation from the [planned monitoring](#) of normal [overt arrangements](#) – refer to section C.2.2 [Responsibilities and authorities](#).

[Records](#) of [reactive investigation](#) shall be retained as evidence meeting the [organisation's requirements](#) and the mandatory [requirements](#) of [stakeholders](#) – refer to section C.4.2.9 [Records](#).

### C.10.1. Internal reactive investigation

∞ The [organisation](#) shall formally [define arrangements](#) for controlling and guiding the [management](#) of internal [reactive investigation](#) and cover:

C.10.1.1 [Evidence preservation](#)

C.10.1.2 [Evidence reporting](#)

C.10.1.3 [Investigation and analysis of root causes](#).

The [organisation](#) shall establish [processes](#) to:

- a) [Record](#) the lifecycle of an [event](#) including the [event](#), [analysis](#) and [corrective action](#) and/or [preventive action](#),
- b) Estimate financial losses associated with the [event](#) including rehabilitation where there has been absence from work – see section C.2.4.6 [Work absence and rehabilitation](#).

[Arrangements](#) may be [covert](#), as necessary – refer to section A.4 [Covert management arrangements](#). The [reactive investigation](#) of [covert arrangements](#) shall have an appropriate degree of separation from the [Reactive investigation](#) of normal [overt arrangements](#) – refer to section C.2.2 [Responsibilities and authorities](#).

Retain [records](#) as per section C.4.2.9 [Records](#).

### C.10.1.1. Evidence preservation

∞ The [organisation](#) shall ensure that all personnel are aware, that having taken measures to [safeguard](#) life, [environment](#) and [assets](#), it is important to preserve site and [communication event](#) evidence – refer to sections C.2.2 [Responsibilities and authorities](#), C.2.4.2 [Induction](#) and C.8.5 [Event response](#).

### C.10.1.2. Evidence reporting

∞ The [event](#) shall be [recorded](#) on the designated [form](#) or other instrument.

Identified [environmental](#) undesired [events](#) shall be reported immediately by telephoning the undesired [event](#) hotline of the relevant government [environmental](#) agency.

The [event](#) shall be [classified](#) according to:

- a) [Impact](#) or potential [impact](#) on personnel [health](#), [safety](#) or [welfare](#), the [environment](#), [commerce](#), [good/service quality](#), reputation and [infrastructure](#),
- b) [Risk classification](#) of associated [structures](#) and [processes](#) as per section **Error! Reference source not found.** [Prospect and risk assessment planning](#),
- c) Actual loss or potential loss and financial estimate,
- d) [Stakeholder required classifications](#).

The [organisation](#) shall ensure that all personnel are aware that they must only [communicate event](#) information to the [organisation's](#) line managers, relevant [customers](#), official bodies and the [emergency services](#). Unauthorised personnel shall not speak to the media – refer to section C.2.5.2.2 [External communication, consultation, participation and reporting](#).

[Confidentiality](#) shall be [maintained](#) as per sections C.2.5.2 [Communication, consultation, participation and reporting](#) and C.4.2.10 [Access](#).

The [organisation](#) shall submit reports to external bodies and [customers](#) as [required](#) by legislation and [contracts](#) – refer to section C.2.5.2.2 [External communication, consultation, participation and reporting](#).

### C.10.1.3. Investigation and analysis of root causes

∞ The [organisation](#) shall appoint a [competent](#) person with suitable [authority](#) to conduct the [investigation](#) and [analysis](#) of an [event](#) – refer to sections C.2.4.4 [Competence](#) and C.2.2 [Responsibilities and authorities](#). The [competent](#) person shall seek and engage [expert](#) advice necessary to complete an appropriate [investigation](#) of the [event](#) and any implications related to other [structures](#) and [processes](#) – refer to section C.2.3 [Provision of expert advice and assistance](#).

The [event](#) shall be [classified](#) according to its potential to [significantly impact](#) facets of the [organisation's](#) performance according to section C.10.1.3.1 [Event classification](#).

For [significant events](#) such as accidents involving loss of life, major injury, major [pollution](#), major [customer](#) complaint etc., the [organisation](#) shall appoint a [competent](#) person to head and [coordinate](#) a formal [investigation](#) and [define](#) its formal terms of reference – refer to section C.2.4.4 [Competence](#).

Personnel involved in the [event](#) shall be interviewed as necessary and evidence collated and [verified](#) as [practicable](#). The [immediate causes](#) of the [event](#) shall be [determined](#) and [required](#) supplementary

[actions](#) shall be taken to meet [stakeholder](#) legitimate needs. [Communication](#) with [stakeholders](#) and the media shall be conducted as per section C.2.5.2 [Communication, consultation, participation and reporting](#).

The [root causes](#) of the [event](#) shall be [determined](#) and [recorded](#) as per section C.10.1.3.2 [Root cause classification](#).

Where appropriate [corrective action](#) and/or [preventive action](#) shall be proposed and approved by the [structure and process owners](#).

The [analysis](#) report(s) for major [events](#) shall be independently [peer reviewed](#) by a specialist(s) appropriate to the nature of the [event](#) – refer to C.2.3 [Provision of expert advice and assistance](#).

If the [event](#) involves [human violations](#) of the [organisation's management system](#) or applicable legislation the [organisation](#) shall carry out further [investigation](#) and initiate disciplinary [processes, as applicable](#) – refer to section C.2.4.8 [Discipline](#).

The [event](#) report(s) shall be fed into [management review](#) as per section 0 [Review and Action](#), and [corrective action](#) and/or [preventive action](#) implemented as per section C.9.2 [Corrective and preventive action](#).

An [internal audit](#) of the [structures](#) and [processes](#) associated with the [event](#) shall be performed with an appropriate scope when the circumstances indicate that this will add [significant value](#) – refer to section C.11.2 [Internal audit](#).

#### **C.10.1.3.1. Event classification**

∞ The [organisation](#) shall define [event classification](#) definitions for internal [events](#) according to their potential to [significantly impact](#) facets of the [organisation's](#) performance.

[Events](#) shall be [classified](#) after initial reporting and as necessary [reclassified](#) during the [processing](#) of the [event investigation](#) according to:

- a) Internal [event classification](#) definitions,
- b) External [event classification](#) definitions where [required](#) by external [stakeholders](#) – refer to section C.2.5.2.2 [External communication, consultation, participation and reporting](#).

#### **C.10.1.3.2. Root cause classification**

∞ The [organisation](#) shall define [root cause classification](#) definitions aligning with the [structures](#) of this [MSS](#) to facilitate [corrective action](#) and [preventive action](#) – refer to section C.9.2 [Corrective and preventive action](#).

[Root causes](#) shall be identified and [recorded](#) according to the [root cause classification system](#).

### **C.10.2. External reactive investigation**

∞ The [organisation](#) shall [investigate supplier, customer](#) and other [stakeholder events](#) which have the potential to [impact](#) the [organisation](#) – refer section C.10.1 [Internal reactive investigation](#).

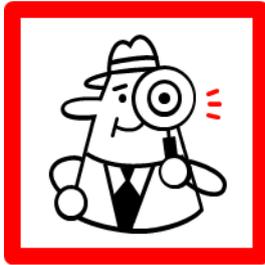


An [external audit \(second party\)](#) of the [structures](#) and [processes](#) associated with the [event](#) shall be performed with an appropriate scope when the circumstances indicate that this will add [significant value](#) and is [practicable](#) – refer to section C.11.3 [External audit](#). See also 0 [Suppliers](#).

The [organisation](#) shall survey and collect [event](#) and [performance data](#) relating to its external [commercial environment](#) to support [marketing](#) as per section C.3.2 [Marketing](#) and to support [continual](#) improvement via [management review](#) as per sections 0 [Review and Action](#) and 0 and [Change](#).

Retain [records](#) as per section C.4.2.9 [Records](#).

## C.11. Planned Monitoring



∞ The [organisation](#) shall formally [define arrangements](#) for controlling and guiding the [management](#) of [planned monitoring](#) and cover:

- 0 [Monitoring planning](#)
- C.11.2 [Internal audit](#)
- C.11.3 [External audit](#)
- C.11.4 [Independent audit](#)
- C.11.5 [Inspection](#)

C.11.6 [Survey and benchmarking](#)

C.11.7 [Self-monitoring and vigilance](#)

The [organisation](#) shall ensure that [planned monitoring](#) is compliant with its [policy](#), [strategic plan](#), [objectives](#) and legislation – refer to sections C.1 [Assessment and Development of Controls](#).

[Planned monitoring](#) shall be vigilant for [events](#) and where revealed during the [planned monitoring process](#) ensure that they are reported and subjected to [reactive investigation processes](#) as per section C.10.1 [Internal reactive investigation](#).

[Planned monitoring](#) shall, [as appropriate](#), contribute to the generation of [indicators](#) as per section C.4.3.2 [Indicators](#).

Some of the [arrangements](#) may be [covert](#), as necessary as well as [monitoring](#) being scheduled and/or conducted [covertly](#) – refer to section A.4 [Covert management arrangements](#). The [planned monitoring](#) of [covert arrangements](#) shall have an appropriate degree of separation from the [planned monitoring](#) of normal [overt arrangements](#) – refer to section C.2.2 [Responsibilities and authorities](#).

[Records](#) of [planned monitoring](#) shall be retained as evidence – refer to section C.4.2.9 [Records](#).

### C.11.1. Monitoring planning

∞ The [organisation](#) shall [define criteria](#) or a program for determining what type and when [planned monitoring](#) is to be performed. [Planned monitoring](#) shall make appropriate use of [measurement](#), [data processing](#) and – refer to sections C.1.8 [Management tools and techniques](#), C.4.3 [Processing](#) and C.7.1.7 [Measurement and testing](#).

[Planned monitoring](#) shall cover the [operation](#) of the [organisation](#) and [projects](#) with a suitable degree of frequency and scope. This shall be sufficient to provide confidence that the [requirements](#) of the [management system](#) across its scope of application and the functionality of the [organisation](#) is [effective](#) and [efficient](#) and that any institutional decline is detected to facilitate [corrective action](#) as per section C.9.2 [Corrective and preventive action](#).

[Planned monitoring](#) shall ensure that [prospect and risk controls](#) have been implemented to achieve [prospect and/or risk improvement](#) and are [effective](#) – refer to section C.1.6.5 [Prospect and risk improvement](#).

Additional [planned monitoring](#) shall be conducted, as necessary, following [events](#) as per section 0 [Reactive investigation – Events](#) or if there are other concerns relating to [performance](#) as per section 0 [Review and Action](#)

Each type of [monitoring](#) shall:

- a) Monitor the [effectiveness](#) and [efficiency](#) of subordinate [monitoring](#) types unless it is [atomic](#),
- b) Employ [monitoring](#) teams and individuals that are [competent](#) with respect to leading the team, performing the type of [monitoring](#) and possession of [knowledge](#) of the [structures](#) and the [processes](#) being [monitored](#) – refer to as per section C.2.4.4 [Competence](#),
- c) Only engage [competent](#) monitoring personnel from outside of the [organisation](#) from an approved [supplier](#) as per section 0 [Suppliers](#),
- d) [As applicable](#), score compliance as per section A.5.1 [Compliance scoring system](#).

[Planned monitoring](#) shall cover:

- e) Progress and completion of the [organisation’s objectives](#) – refer to section C.1.4 [Objectives](#).
- f) [Structures](#) and [processes](#) with associated [tolerable risks](#) to ensure the [risks](#) have not become or are approaching being [unacceptable risk](#),
- g) [Structures](#) and [processes](#) with associated broadly acceptable [risks](#) to ensure that the [risks](#) have not become or are approaching being [unacceptable risk](#) requiring [risk control review](#) and [action](#).
- d) Recently changed [structures](#) and [processes](#) – refer to section C.9.1 [Change management lifecycle](#),
- e) [Commercially responsibility](#) performance, [\[S\]](#)
- f) [Social responsibility](#) performance, [\[G\]](#)

[Planned monitoring](#) shall take account of previous [reactive investigation](#) and [planned monitoring](#) experience and the [prospect and risk controls monitoring requirements](#) identified according to section C.1.6.5 [Prospect and risk improvement](#).

If the [organisation](#) manages low frequency high [impact risks](#), where direct [reactive performance data](#) is inevitably limited or not [available](#), it shall monitor the indirect [aspects](#) and [prospect and risk controls](#) that contribute to the overall [performance](#) – refer to section C.1.6.5 [Prospect and risk improvement](#).

### C.11.2. Internal audit

∞ The [organisation](#) shall [define](#) its [internal audit arrangements](#) and [maintain](#) an [internal audit schedule](#) structured to ensure that:

- a) The [management system](#) complies with this standard, including sections B [General Requirements](#) and C [Specific Requirements](#),
- b) The [management system](#) complies with other adopted standards,
- c) The [management system](#) complies with new or changed legislation since the last [internal audit](#),
- d) The [organisation’s](#) formal [management system](#) has been implemented, is being complied with and appears to be [effective](#), [efficient](#) and [prospect and/or risk based](#) or [prospect and/or risk informed](#), where [practicable](#).

The [organisation](#) shall be internally [audited](#) at least annually according to the scope defined by its [audit schedule](#) unless otherwise justified and shall be compliant with mandatory [stakeholder requirements](#).

The [internal audit schedule](#) shall take account of the [organisation's policy](#), [strategic plan](#), [objectives](#), [structure](#) and [process risks](#), [reactive investigation](#) experience and [planned monitoring](#) experience.

The [organisation](#) shall agree and approve the [internal audit schedule](#) as part of the [management review process defined](#) in section 0 [Review and Action](#).

Additional [internal audit](#) shall be conducted, as necessary, following [investigated events](#) or if there are other concerns relating to [performance](#) – refer to sections 0 [Reactive investigation](#) and 0 [Review and Action](#).

[internal audits](#) shall:

- e) Have a [defined](#) scope,
- f) Be [planned](#) to ensure their [effective](#) and [efficient](#) execution,
- g) Be conducted objectively and impartially by [competent](#) Internal Auditors – see section C.2.4.4 [Competence](#),
- h) Employ auditors which do not participate in or are [managerially responsible](#) for the [structures](#) and [processes](#) included in the scope of the audit,
- i) [Identify](#) and agree nonconformities, [corrective actions](#) and [observations](#) for improvement, [as applicable](#),
- j) Be formally reported and the report circulated to [responsible](#) managers.

[Corrective actions](#) and adopted [observations](#) shall be implemented as per section C.9.2 [Corrective and preventive action](#) in a timely manner and [audit](#) findings [monitored](#) until closed out under the direction of the [responsible](#) manager.

Retain [records](#) as per section C.4.2.9 [Records](#).

### **C.11.3. External audit**

∞ Identify [suppliers](#) that require auditing as per section C.6.1 [Classification and vetting](#).

A [supplier audit schedule](#) shall be [maintained](#) that identifies the scope and periodicity of the [audit](#) for each [supplier](#), [as appropriate](#).

Conduct additional [external audits \(second party\)](#), as necessary, following [events](#) as per section 0 [Reactive investigation – Events](#) or if there are other concerns relating to [performance](#) – refer to 0 [Review and Action](#).

The [organisation](#) shall consider the [need](#) for additional [supplier audits](#) following reported and [analysed events](#) covered in section C.10.1.3 [Investigation and analysis of root causes](#) or other concerns relating to [supplier's performance](#) covered in section C.6.4 [Performance evaluation](#) .

Appoint [competent](#) external auditors to conduct [external audits \(second party\)](#) of [suppliers](#) – see section C.2.4.4 [Competence](#).

External auditors shall prepare [supplier audit](#) reports and [identify](#) and agree [nonconformities](#) and [corrective actions](#) and make [observations](#) for improvement, [as applicable](#).

Close out of [supplier audit](#) findings shall be [monitored](#) and completion confirmed.

Retain [records](#) as per section C.4.2.9 [Records](#).

#### **C.11.4. Independent audit and surveillance**

∞ The [management system representative](#) of the [organisation](#) being audited shall [identify](#) the scope of the [independent audits \(third party\)](#) being [managed](#) by independent bodies or clients and agree suitable audit or surveillance dates.

The [management system representative](#) shall arrange for staff to be [available](#) and [coordinate](#) them to meet the auditor's needs, make a private room [available, as appropriate](#), and make provision for their [welfare](#) while on the [organisation's](#) premises.

All personnel shall [cooperate](#) and participate positively in the [audit](#) or any other types of surveillance conducted by an external body and ensure that [data](#) is protected as per section C.4.2.10 [Access](#).

The [management system representative](#) and other [responsible](#) managers shall attend the [audit](#) or other closing meeting and as far as possible agree [corrective actions](#).

If not supplied by the auditing body, the [management system representative](#) shall [record corrective actions](#) and [observations](#) for improvement and distribute the [audit](#) report to relevant staff, [as applicable](#).

[Responsible](#) managers shall implement agreed [corrective actions](#) and adopted [observations recorded](#) by auditees as per section C.9.2 [Corrective and preventive action](#) in a timely manner and report completion to the [management system representative](#).

Retain [records](#) as per section C.4.2.9 [Records](#).

#### **C.11.5. Inspection**

∞ The [organisation](#) shall [identify significant prospect and risk controls](#) requiring periodic [inspection](#) within the [organisation's](#) and [projects' structures](#) and [processes](#) as per section C.1.6.5 [Prospect and risk improvement](#).

Conduct random unannounced [inspections](#) to provide additional confidence [required](#) by [stakeholders, as applicable](#) and ensure the conduct aligns with its [policy statement](#) – refer to section C.1.3 [Policy statement](#).

Conduct additional [inspections](#), as necessary, following [events](#) as per section 0 [Reactive investigation – Events](#) or if there are other concerns relating to [performance](#) – refer to 0 [Review and Action](#).

The [organisation's](#) material [assets](#) shall be inspected as per section C.5.5 [Maintenance, inspection and testing](#).

The [organisation](#) shall [maintain forms](#) or other instruments for guiding and recording [inspections](#) results.

Ensure that [inspections](#) are conducted using [competent](#) staff as per section C.2.4.4 [Competence](#).

[Record](#) findings and where possible immediately agree and close out findings. Where issues cannot be readily closed out, formally [record](#) them as nonconformities and [managed](#) them as per section C.9.2 [Corrective and preventive action](#).

Where [required](#), [inspection data](#) shall be processed as per section C.4.3 [Processing](#).

Retain [records](#) as per section C.4.2.9 [Records](#).

### C.11.6. Survey and benchmarking

∞ The [organisation](#) shall [maintain](#) suitable [arrangements](#) to [record customer](#) and other [stakeholder](#) satisfaction.

[Customer](#) and [significant stakeholder](#) satisfaction surveys shall be conducted according to [defined arrangements](#) and [data](#) gathered on the perceived [quality](#) of the [organisation's goods](#) and/or [services](#).

The [data](#) shall be [analysed](#) as per section C.4.3 [Processing](#), to [redefine](#) or refine the [organisation's goods](#) and/or [services](#) quality specification. Refer to section C.7.1.1 [Structure and process definition](#).

Reasons shall be [recorded](#) when the conduct of a [customer](#) survey has not been possible. Refer to section C.4.3.2 [Indicators](#) regarding [events](#) involving a [customer](#) complaint.

The [organisation](#) shall conduct additional surveys covering:

- a) Critical topics identified during [management review](#) conducted as per section 0 [Review and Action](#),
- b) [Benchmarking](#) of one part of an [organisation's](#) functionality with another part of the [organisation](#), [S] [≠μ]
- c) [Benchmarking](#) of the organisation's functionality with another organisation(s), [G]
- d) [Organisation morale](#), [S] [≠μ]
- e) [Organisation culture](#). [S]

Survey [data](#), [as appropriate](#), shall be included in [indicator data](#) as per section C.4.3.2 [Indicators](#).

Retain [records](#) as per section C.4.2.9 [Records](#).

### C.11.7. Self-monitoring and vigilance

∞ The [organisation](#) shall ensure that all personnel are aware that [processes](#) are to be conducted in compliance with the [management system](#) and [customer](#) and other [stakeholder requirements](#) as per section B.3 [Stakeholder specific requirements](#) and that they must be constantly self-[monitoring](#) and vigilant – refer to sections C.2.2 [Responsibilities and authorities](#).

All personnel shall self-monitor and be vigilant with respect to:

- a) Personnel to ensure their [health](#), [safety](#), [welfare](#) and correct [behaviour](#),
- b) Constantly observing [structures](#) and [processes](#) to ensure their [integrity](#), [safety](#), [security](#), correct functionality,
- c) [Significant threats](#) to personnel, physical [assets](#), the [environment](#) or [good/service quality](#) requiring [processes](#) to be immediately halted,



- d) Potential or breached [security](#) requiring urgent [action](#).
- e) Compliance with the [management system](#) and [human error](#) and [human violation](#),
- f) Sensed or [observed customer](#) or other [stakeholder](#) dissatisfaction,
- g) Errors [observed](#) in [records](#) – refer to section C.4.2.9 [Records](#),
- h) [Identifying opportunities](#) for improvement – refer to section 0 [Change](#).

Following self-[monitoring](#) and vigilance, personnel shall take necessary prompt [corrective action](#) and [preventive action](#) directly or through their line manager as per section C.9.2 [Corrective and preventive action](#) .

Where [required](#), [emergency](#) and [crisis](#) response [processes](#) shall be immediately initiated as per section C.8.5 [Contingency events](#).

[Significant observed events](#) shall be [recorded](#) and [analysed](#) as per section 0 [Reactive investigation – Events](#).

Retain [records](#) as per section C.4.2.9 [Records](#).

## C.12. Review and Action



∞ The [organisation](#) shall formally [define arrangements](#) for controlling and guiding the [management](#) of [review](#) and [action](#) and cover:

- 0 [Review scheduling](#)
- C.12.2 [Review](#)
- C.12.3 [Review output and action](#)
- C.12.4 [Action realization.](#)

The [organisation](#) shall:

- a) Ensure that [management review](#) and [action planning](#) are compliant with its [policy](#), [strategic plan](#), [objectives](#) and legislation – refer to sections C.1 [Assessment and Development of Controls](#).
- b) Endeavour to ensure by [structured](#) and [systematic review](#) that all elements of its [structures](#) and [processes](#) deliver [value](#) continuously, [continually](#) or potentially via [contingency arrangements, as applicable](#), and stay aligned with [stakeholder needs](#) and [expectations](#).
- c) Remove [redundant](#) non-[value](#) adding [structures](#) and [processes](#) where this is [commercially](#) viable.
- d) Ensure that [action planning](#) is implemented in compliance with section 0 [Change](#).

Some [arrangements](#) may be [covert](#), as necessary – refer to section A.4 [Covert management arrangements](#). The [review covert arrangements](#) shall have an appropriate degree of separation from the [planned monitoring](#) of normal [overt arrangements](#) – refer to section C.2.2 [Responsibilities and authorities](#).

Retain [review](#) and [action records](#) as evidence as per section C.4.2.9 [Records](#).

### C.12.1. Review scheduling

∞ The [organisation](#) shall establish and [maintain](#) a [schedule](#) of the [organisation's](#) controlled [documents](#) and other relevant [data](#) such as legislation and standards that require periodic [review](#). The [review](#) shall also include the functionality of the [management system](#) as a whole.

Timely periodic [reviews](#) shall be scheduled and performed by a designated [competent](#) person. The periodicity or other [defined requirement](#) triggering [reviews](#) shall be [defined](#) and take account of, as relevant:

- a) [Stakeholder requirements](#) including legislation – refer to section C.1.5 [Legislation and standards](#),
- b) The [organisation's vision](#), [strategic plan](#), [policy statement](#), [prospect and risk assessments](#) and [structure](#) and [process](#) justifications – refer to section C.1 [Assessment and Development of Controls](#),
- c) Personnel appraisals and individual and group development, [training](#) and other needs such as staffing levels – refer to section C.2.4.4 [Competence](#),
- d) [Commercial performance](#), [prospects](#) and needs – refer to section 0 [Commerce](#),
- e) [Commercially responsibility](#) performance, [\[S\]](#)
- f) [Social responsibility](#) performance, [\[G\]](#)
- g) [Data performance](#), [prospects](#), needs and [access](#) rights – refer to section 0 [Data](#),

- h) Matter and energy [performance](#), usage, [prospects](#) and needs – refer to section 0 [Matter and Energy](#),
- i) [Supplier performance](#), usage and needs – refer to section 0 [Suppliers](#),
- j) [Normal structures](#) and [normal processes performance, goods and services delivery capability, prospects](#) and [needs](#) – refer to section 0 [Normal Structures and Processes](#),
- k) [Contingency structures](#) and [processes, performance, prospects](#) and needs – refer to section 0 [Contingency Structures and Processes](#),
- l) Recently implemented and active change programs – refer to section 0 [Change](#),
- m) Recent internal and external [events](#) including nonconformities, [emergencies, crises, disaster recoveries](#), intentionally halted [processes](#), insurance claims, [project events, testing](#) and [training](#) and [event response performance](#) – refer to section 0 [Reactive investigation – Events](#),
- n) [Planned monitoring performance](#), findings and needs – refer to section 0 [Planned monitoring](#).

A hierarchical [structure](#) of [management](#) meetings shall be [defined](#) for the [organisation](#) and its [projects](#) headed by a main [management review](#) meeting that shall be conducted at least annually. The [arrangements](#) shall [define](#):

- o) Attendees and the chairperson,
- p) The periodicity or the circumstances that will initiate the meeting,
- q) Terms of reference including [purpose, responsibilities](#) and [authorities](#), and essential agenda topics – refer to section C.2.2 [Responsibilities and authorities](#),
- r) How the types of meeting interact including [accountability](#) and [required](#) reporting.

Chairpersons shall ensure that an appropriate amount of time is allocated for the [review](#) meetings and each [aspect](#) of the agenda.

### C.12.2. Review

∞ Managers shall prepare reports on the [performance](#) of elements of the [organisation](#) for which they are [responsible](#) prior to [management](#) meetings. They shall be suitable and sufficient to support the meeting agenda and allow attendees to read the reports in advance of the meeting. Reports shall comply with the [requirements](#) of section C.4.2.10 [Access](#) – see also section A.4 [Covert management arrangements](#).

The main [management review](#) shall cover the following issues, associated [performance](#) and [required actions](#) either directly or by confirmation of the satisfactory output of a subordinate meeting:

- a) [Planned monitoring](#) including [audit](#), survey and [inspection](#) results,
- b) [Reactive investigation](#) including accidents, undesired and desired [events](#), complaints and other [stakeholder](#) feedback (positive or negative) resulting from the [organisation's operations](#),
- c) Internal and external [stakeholder](#) interactions, [needs](#) and [expectations](#),
- d) Compliance with current and [planned](#) legislation and other [stakeholder requirements](#),
- e) [Significant](#) new and changed [aspects, hazards, risks](#) and their control – refer to [Appendix 6: General Aspects of an Organisation](#),
- f) Newly [available](#) internal or external technological [innovation](#),
- g) [Suppliers](#),
- h) [Commercial performance](#) including finance, sales, [marketing](#) and future [prospects](#),
- i) [Commercially responsibility](#) performance, [\[S\]](#)
- j) [Social responsibility](#) performance, [\[G\]](#)
- k) Use of [management tools](#) and techniques,



- l) [Goods](#) and [services](#) delivery and [project management performance](#),
- m) Internal [projects](#) and change [initiatives](#),
- n) Human [resource](#), [competence](#) and [training performance](#) and future [requirements](#),
- o) [Management system](#),
- p) [Organisation vision](#) and [strategy](#),
- q) General [organisation performance](#) and achievement of previously [defined organisation objectives](#) and action [plan](#),
- r) Approval of year end accounts and reports prior to submission to external bodies,
- s) Setting or revision of [objectives](#), [action plan](#), financial budget and [resource planning](#).

The [review](#) of each issue shall include the [review](#) of relevant [key performance indicators](#) derived as per section C.4.3.2 [Indicators](#). Where [key performance indicators](#) trends or other information indicate changes in [performance](#) they shall be adequately explained. The [management review](#) shall include a conclusion as to the overall functionality of the [organisation](#) and whether it is satisfactory with respect to all facets of [organizational performance](#) and whether each facet of [performance](#) is judged to be steady, improving or declining. The [review](#) shall consider [opportunities](#) to improve and where appropriate support them.

Where [practicable](#) decisions shall be:

- Based on a [process](#) of [due diligence](#),
- '[Evidence based](#)' or '[evidence informed](#)',
- '[Prospect and risk based](#)' or '[prospect and risk informed](#)'.

The basis for decisions shall be [recorded](#) – refer to section C.4.2.9 [Records](#).

### **C.12.3. Review output and action**

∞ Meeting minutes shall be [recorded](#) and circulated to appropriate parties. Minutes shall comply with the [requirements](#) of section C.4.2.10 [Access](#) – see also section A.4 [Covert management arrangements](#).

[As applicable](#), [action plans](#) shall be agreed, [defined](#) and prioritized.

Minutes and [action plans](#) shall [record](#) 'what, how, where, who, when and why', [as applicable](#).

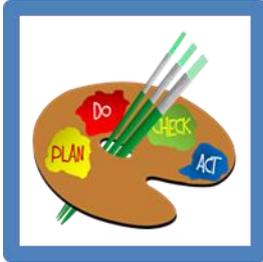
### **C.12.4. Action realization**

∞ The [organisation](#) shall establish and implement [arrangements](#) for [tracking](#) the progress of [management action](#) realization, including the delegation of [actions](#) into sub [actions](#), such that the current status of [actions](#) is [transparent](#).

[Responsible](#) managers shall progress their [actions](#) according to their prioritization and [record](#) and report the progress of their implementation including delegation where applicable.

[Actions](#) involving [significant](#) change shall be [managed](#) as per section 0 [Change](#).

## D. General Requirements Guidance



This [MSS](#) main section covers the general generic [requirements](#) of the [management system](#) and general compliance issues regarding the twelve elements of this [MSS](#) contained in section C [Specific Requirements](#).

It also includes general background information to assist with the implementation of the topic. This cannot be exhaustive or universal because of the [diversity](#) of individual [organisations](#) but the information will hopefully stimulate the [organisation](#) to seek further information through its own research making use of [expert](#) advice as necessary – refer to section E.2.3 [Provision of expert advice and assistance](#).

### D.1. Scope of organisation's arrangements

≤ An unrestricted scope will include the following facets of [performance](#):

- [Good](#) and [service quality management](#),
- [Prospect and risk management](#),
- Personnel [health](#) and [safety](#) and [welfare management](#),
- [Environmental](#) protection and nurture [management](#),
- [Infrastructure management](#),
- [Commercial management](#),
- [Project management](#),
- [Data management](#) etc.

However, [organisations](#) may initially wish to restrict the scope of application of this [MSS](#) leaving the [option](#) to expand the scope at a later date e.g. it could be restricted to [good](#) and [service quality](#) supplied to external [customers](#) or it could be restricted to a part of the [organisation's](#) [operations](#).

### D.2. Coherent functionality

≤ The [MSS](#) requires that [structures](#) and [processes](#) are [managed](#) as a whole and not in isolation of each other. This means that [management](#) activity must be [coordinated](#) and staff must [cooperate](#) in achieving the overall [objectives](#) of the [organisation](#). [Synergistic](#) benefits result from this approach where the whole becomes more than the sum of the parts.

It should be noted that [structures](#) and [processes](#) have the potential to [impact](#) all facets of [organisation performance](#) e.g. [commercial](#), [goods](#) and [services quality](#), [health](#) and [safety](#) and [environment](#) etc. Also attempting to control one facet of [performance](#) in isolation may negatively [impact](#) other facets. It is therefore necessary to focus on all these [aspects](#) of [performance](#) simultaneously and apply [creativity](#) to achieve optimal low [risk](#) solutions that [equitably](#) satisfy the [stakeholders' needs](#) and [expectations](#) making the best use of [resources](#). This is achieved by operating [Plan-Do-Check-Act management](#) cycles throughout the [organisation](#) at all levels that are harmoniously vertically and horizontally integrated – refer to Figure 3: Universal Plan-Do-Check-Act throughout an organisation. Plan-do-check-act may be applied throughout the [organisation](#) because conceptually it has a [fractal](#) nature.

The general [management principles](#) forming the foundation of this [MSS](#) are contained in section A.6 [Management Principles](#).

### D.3. Stakeholder specific requirements

< An [organisation](#) should as far as possible [define](#) generic [management arrangements](#) applicable to all of its [operations](#). However, circumstances may arise where a [stakeholder](#) requires the [organisation](#) to work to their own particular [requirements](#). This should be accommodated through additional formal [arrangements](#) that add to or vary the [organisations](#) generic [management arrangements](#). This has the advantage of allowing the generic [arrangements](#) to control the [organisation's](#) normal generic [processes](#) in an optimal way and only vary them when delivering a [good](#) or [service](#) applicable to a specific [stakeholder](#). The separate [arrangements](#) also make it clear to personnel exactly what must be done differently to normal to meet the [stakeholder's](#) specific [requirements](#).

### D.4. Application of the MSS

< In [principle](#), this [MSS](#) can be applied to any part of an [organisation](#) irrespective of scale because of the [fractal](#) nature of an [organisation](#) e.g. a multinational [organisation](#) or just a section of it. See also D.1 [Scope of organisation's arrangements](#).

The [organisation](#) should not apply the [MSS requirements](#) automatically without judging how the [requirement](#) can best be applied to optimally add [value](#) to the functionality of the [organisation](#). Some of the [requirements](#) of the [MSS](#) are not universally applicable to all [organisations](#) or to the same degree. This will be particularly true for small or micro [organisations](#). The [organisation](#) should justify [requirements](#) that have not been applied or only partially applied to provide a compliance [transparency record](#) and to facilitate [management system review](#) as [required](#) under section 0 [Review and Action](#). [Expert](#) advice should be sought as necessary – refer to section E.2.3 [Provision of expert advice and assistance](#).

It should be noted that all of the [organisations structures](#) and [processes](#) potentially [impact](#) all facets of its [performance](#) such as [health](#), [safety](#), [environment](#), [quality](#), [commerce](#) and any other [aspects](#) and none of them should be [managed](#) in isolation. Each [requirement](#) of this [MSS](#) is potentially applicable to all facets of [performance](#) – refer to [Appendix 6: General Aspects of an Organisation](#).

Expanding [organisations](#) and those planned to grow should note section E.4.1 [Management system structure](#).

## E. Specific Requirements Guidance

This [MSS](#) main section contains twelve hierarchical subsections corresponding to section C [Specific Requirements](#). The overall relationship and philosophy of the twelve elements is described in section A.1.3 [Universal PDCA Twelve Element Structure](#).

### E.1. Assessment and Development of Controls

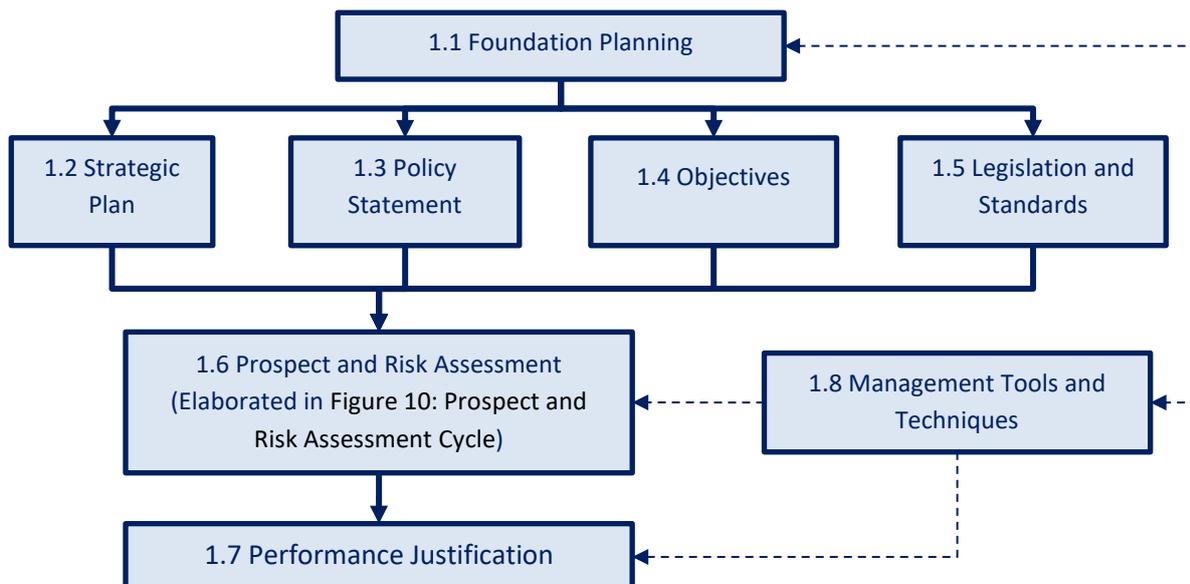


≤ Assessment and development of controls comprises [requirements](#) for [management analysis](#) and [synthesis processes](#) to ensure that the [organisation's structures](#) and [processes](#) are fit for [purpose](#) and minimize the potential to [harm](#) people, the [environment](#) and other [assets](#) important to [stakeholders](#).

Identified relevant legislation and adopted standards [requirements](#) and the developed [prospect and risk controls](#) perform a foundation for the next eight sections of the [MSS](#):

- 0 [Personnel](#),
- 0 [Commerce](#),
- 0 [Data](#),
- 0 [Matter and Energy](#),
- 0 [Suppliers](#),
- 0 [Normal Structures and Processes](#),
- E.7.2 [Contingencies](#),
- 0 [Change](#).

[Planning](#) is a critical activity that is essential to success, but it can be a very complex [process](#) depending on the nature of the [organisation](#) or [project](#) and needs to be performed appropriately. It may involve the application of many [management tools](#) and techniques such as [prospect and risk assessment](#) – refer to section E.1.8 [Management tools and techniques](#).



**Figure 9: Assessment and Development of Controls Subsections**

### E.1.1. Foundation planning

≤ The [purpose](#) of foundation [planning](#) is to formulate and organize the general [arrangements](#) for implementing the [organisation's purpose](#) and goals while aligning with its [stakeholders' needs](#) and [expectations](#). Foundation [planning](#) helps [define](#) the context of the [organisation](#) and help [structure](#) and organize the more detailed [management planning processes](#) covered in the following sections.

[Stakeholder needs](#) and [expectations](#) may be shared or held individually and possibly conflict. This is more [likely](#) to be optimal if a [fully integrated management approach](#) is adopted. [Stakeholder needs](#) and [expectations](#) typically relate to:

- [Goods](#) and [services](#) delivered by the [organisation](#),
- Interactions with the [organisation impacting](#) them as an [organisation](#) or an individual,
- Personnel [health](#) and [safety](#) and [welfare](#),
- [Impacts](#) on the local and general [environment](#),
- Local and general social [impacts](#),
- Local and general [commercial impacts](#).

[Stakeholder needs](#) and [expectations](#) may be [impacted](#) by a wide range of [aspects](#) applicable to the [structures](#) and [processes](#) of the [organisation](#) – refer to [Appendix 6: General Aspects of an Organisation](#).

The [organisation](#) should identify its principal [structures](#) and [processes](#) that deliver its [purpose](#) including how these interact and provide support to each other. This aids the [planning](#) and [structuring](#) of [prospect and risk assessments](#) – refer to section E.1.6.1 [Prospect and risk assessment planning](#) and [Appendix 3.4 Prospect and risk register structure](#).

The establishment of an inventory of the [organisation's significant structures](#) and [processes data](#) aids the orderly conduct of foundation planning refer to section E.4.2.1 [Databases](#). These should ideally be readily searchable hierarchical [structures](#).

An [organisation's](#) external [environment](#) typically includes:

- [Customer](#) Markets,
- Competition,
- Technology,
- [Supplier](#) markets,
- Labour markets,
- The economy,
- Legislation and regulation,
- Local and general physical [environment](#).

Cyclic [management](#) activities typically include:

- Submission of mandatory reports,
- Tax payments due,
- [Planned monitoring](#),
- [Review](#) of elements of [management system](#) – refer to section E.12.1 [Review scheduling](#),
- [Management review](#) meetings – refer to section E.12.1 [Review scheduling](#),

- Personnel [reviews](#),
- End of financial year.

If necessary cyclic [plans](#) of [management](#) activity should be supported by integrated subordinate cyclic [plans](#).

General [planning](#) should be elaborated and cascaded down throughout the [organisation](#) via a hierarchy of integrated subordinate [planning](#).

Foundation [planning processes](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Boston grid](#)
- ❖ [Brainstorming](#)
- ❖ [Cause and effect analysis](#)
- ❖ [Check sheets](#)
- ❖ [Data handling and display](#)
- ❖ [Decision tree](#)
- ❖ [Flow chart](#)
- ❖ [Focus groups](#)
- ❖ [Focus groups](#)
- ❖ [Infrastructure tour](#)
- ❖ [Interviews](#)
- ❖ [Nominal group technique](#)
- ❖ [Pareto analysis](#)
- ❖ [Pareto charts](#)
- ❖ [Political, economic, sociological, technological, legislation and environment analysis](#)
- ❖ [Portfolio analysis](#)
- ❖ [Prioritization matrix](#)
- ❖ [Probability and consequence grid/diagrams](#)
- ❖ [Process flow charts](#)
- ❖ [Project profile model](#)
- ❖ [Prospect and/or risk modelling and risk simulation](#)
- ❖ [Prospect and/or risk workshop](#)
- ❖ [Rag status reports](#)
- ❖ [Ranking and rating](#)
- ❖ [Relations diagram](#)
- ❖ [Resource analysis](#)
- ❖ [Stakeholder analysis](#)
- ❖ [Stakeholder engagement matrices](#)
- ❖ [Strengths weaknesses, opportunities and threats analysis](#)
- ❖ [Surveys](#)
- ❖ [Tables](#)
- ❖ [Tree diagram](#)
- ❖ [Uncertainty analysis](#)
- ❖ [Utility theory](#)
- ❖ [Value analysis](#)
- ❖ [Visualization techniques](#)
- ❖ [Voting](#)

### E.1.2. Strategic plan

≤ The [strategic plan](#) is a key output of foundation [planning](#) and [defines](#) the key [strategic requirements](#) that must be implemented by [tactical](#) and [operational structures](#) and [processes](#). There should be [transparent](#) integration between [strategy](#), [tactics](#) and [operations](#) and should be implemented via [Plan-Do-Check-Act management](#) cycles.

[Strategy](#) and [strategic processes](#) should address future aspirations and demands such as:

- Changing the [organisation's structures](#), [processes](#), [goods](#) and [services](#) through the exploitation of [available](#) technological [innovation](#),
- [Organisation](#) size in terms of financial turnover and number of [employees](#),
- Achieving the [organisation's](#) vision, mission and values,
- Implementing significant new and changed legislation and standards,
- Personnel recruitment, contract labour, labour market, competency and succession planning,
- Changing the organisation as an entity, changing goods and services markets and marketing requirements, significant potential contracts, financing, personnel remuneration, competition, and [economic](#) climate,
- Data requirements and its exploitation,
- Matter and energy requirements including suitable and sufficient infrastructure and geographical locations,
- Outsourcing and use of suppliers to provide expert advice and specialist services, labour and other [goods](#) and [services](#).

[Strategic](#) planning [processes](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Boston grid](#)
- ❖ [Decision tree](#)
- ❖ [Focus groups](#)
- ❖ [Gap analysis](#)
- ❖ [Nominal group technique](#)
- ❖ [Political, economic, sociological, technological, legislation and environment analysis](#)
- ❖ [Process flow charts](#)
- ❖ [Project profile model](#)
- ❖ [Prospect and/or risk modelling and risk simulation](#)
- ❖ [Prospect and/or risk workshop](#)
- ❖ [Rag status reports](#)
- ❖ [Ranking and rating](#)
- ❖ [Relations diagram](#)
- ❖ [Resource analysis](#)
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- ❖ [Uncertainty analysis](#)
- ❖ [Utility theory](#)
- ❖ [Value analysis](#)

- ❖ [Visualization techniques](#)
- ❖ [Voting](#)

### E.1.3. Policy statement

≤ The [organisation' policy](#) is the driver for implementing and improving its [management system](#) so that it can [maintain](#) and potentially improve all [aspects](#) of [performance](#) consistent with the expectations of [top management](#) and the [organisation's stakeholders](#).

It should therefore reflect the commitment of [top management](#) to comply with legislation and adopted standards and attempt to [equitably](#) and [ethically](#) satisfy the [needs](#) and [expectations](#) of the [organisations stakeholders](#) while making the best use of [resources](#). The [policy](#) forms the basis upon which the [organisation](#) sets its [objectives](#).

The [purpose](#) of the [policy statement](#) is to clearly [communicate](#) the [organisation's](#) direction and [values](#) to the [stakeholders](#) and what must be visible throughout all [management](#) activity including the [management system](#).

[Policy](#) may be [documented](#) via a concise single page [policy statement](#) supplemented by a more detailed [policy statement\(s\)](#) elaborating on issues in sufficient detail to meet the needs of [stakeholders](#).

Placing the [policy statement\(s\)](#) on the world-wide-web is a very [effective](#) way of [communicating](#) it to [stakeholders](#).

[Management leadership](#), the [management system](#), the [organisation culture](#) and the collective [competence](#) together form an [internal climate](#) that supports and nurtures the [organisation's purpose](#) and [objectives](#). [Leadership](#) and the [sustained](#) influence of the [management system](#) establish a positive [organisation culture](#) over time.

[Overt](#) and [covert data management](#) is covered in section E.4.2.10 [Access](#).

[Policy](#) development [processes](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Focus Groups](#)
- ❖ [Gap Analysis](#)
- ❖ [Political, Economic, Sociological, Technological, Legislation and Environment Analysis](#)

### E.1.4. Objectives

≤ [Objectives](#) help drive positive change and [continual](#) improvement by focusing attention on key [aspects](#) of the [strategic](#), [tactical](#) or [operational](#) functionality of the [organisation](#) or a [project](#). [Objectives](#) should be [defined](#) that reflect the overall [strategy](#) and [policy](#) of the [organisation](#) or [project](#) and deliver the best [value](#) for the expenditure of effort – see also sections E.1.2 [Strategic plan](#), E.1.3 [Policy statement](#) and [Appendix 6: General Aspects of an Organisation](#).

The [purpose](#) and [objectives](#) of the [organisation](#) should be cascaded down through the [organisation](#) and [redefined](#) at every level so that they clearly [define purpose](#) and [objectives](#) appropriate to the [structures](#) and [processes](#) at that level.

### E.1.5. Legislation and standards

≤ The [organisation](#) needs to [identify](#) the legislation obligations that are applicable to its [aspects](#) and [determine](#) how they apply to the [organisation](#). The obligations include legal [requirements](#) that the [organisation](#) is must comply with, and those obligations which the [organisation](#) has discretion over whether or not to adopt. Legal obligations are mandatory [requirements](#) issued by governmental [entities](#) and may be international, national or territorial.

Compliance obligations also include other [stakeholder requirements](#) related to its [aspects](#), to which the [organisation](#) chooses to adopt.

The [organisation's process](#) for determining the [needs](#) and [expectations](#) of [stakeholders](#) is important when determining which obligations it has discretion over, and which it will be adopt – refer to section E.1.1 [Foundation planning](#).

The primary difference between a legal [requirement](#) and a voluntary obligation is that the [organisation](#) chooses to adhere to its voluntary obligations. However, in many cases, once that choice is made, adherence is mandatory, particularly where legally binding agreements are made.

The [purpose](#) of determining applicable legislation and standards is to assist in the determination of the rules and guidance that are [required](#) to optimally perform the [organisation's processes](#) such that they [equitably](#) meet the [needs](#) and [expectations](#) of its [stakeholders](#) making the best use of [resources](#).

To [create](#) a more [structured](#) and orderly [database](#) of information, legislation [significant](#) to the [organisation](#) and other adopted standards can be conveniently [classified](#) with respect to the following [management](#) topics that align with the principal sections of the [MSS](#):

0. [General management](#),
1. [Assessment and development of controls](#),
2. [Personnel](#),
3. [Commerce](#),
4. [Data](#),
5. [Matter and energy including waste](#),
6. [Suppliers](#),
7. [Good and service delivery](#),
8. [Contingencies](#),
9. [Change](#),
10. [Reactive investigation](#),
11. [Planned monitoring](#),
12. [Review and action](#).

An [organisation](#) can use a variety of methods to [maintain](#) its [knowledge](#) and understanding of its legislation and standards compliance status, including

- [Review](#) of [documented](#) information, i.e., [procedures](#), [documents](#), [records](#),
- Facility tours or [inspections](#),

- Direct [observation](#) and interviews,
- [Project](#) or work [reviews](#),
- [Review](#) of sample [analysis](#) or [test](#) results, and comparison to regulatory limits,
- [Verification](#) sampling/[testing](#),
- Compliance [audits](#), including those conducted by first, second or third parties.

[Management arrangements](#) implementing the remaining sections of this standard should take account of applicable legislation and standards. [Contingency planning](#) is [required](#) under some legislation and is applicable to section E.7.2 [Contingencies](#).

Legislation and standards compliance planning [processes](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Gap Analysis](#)
- ❖ [Infrastructure Tour](#)
- ❖ [Political, Economic, Sociological, Technological, Legislation and Environment Analysis](#)
- ❖ [Tables](#)
- ❖ [Tree Diagram](#)

### E.1.6. Prospect and assessment

< [Organisations](#) exist to fulfil a [purpose](#) and [mission](#) but to achieve this the [organisation](#) must address the [uncertainties](#) contained in the [prospects](#) and [risks](#) of [equitably](#) satisfying the [needs](#) and [expectations](#) of its [stakeholders](#) and also the [uncertainties](#) and variations in its internal [structures](#) and [processes](#) and in the external [environment](#) that the [organisation operates](#) in. The [structures](#) may also be open [systems](#) that may exhibit unpredictable chaotic [behaviour](#) adding to [uncertainty](#). [Organisations](#) can improve the [likelihood](#) of realizing their [objectives](#) by [systematically](#) conducting [prospect and risk assessments](#) and developing [prospect and risk controls](#) using methodologies with an appropriate degree of sophistication for each circumstance. The only justification for using any degree of [systematic prospect and risk assessment](#) is where the [organisation](#) is [likely](#) to be more successful employing it than not or to satisfy a [stakeholder requirement](#). All [structures](#) and [processes](#) should ideally add optimal [value](#). The [organisation](#) or [project](#) should not deploy [resources](#) in conducting any [prospect or risk assessment](#) or with a degree of formality where there is little expectation of adding [value](#), unless it is a [stakeholder requirement](#).

The [purpose](#) of [prospect and risk assessment processes](#) is to seek potential solutions and assess the associated [prospects](#) and [risks](#) with respect to satisfying [stakeholder needs](#) and [expectations](#) while making the best use of [resources](#). Consultation with relevant [stakeholders](#) should be conducted throughout [prospect and risk assessments](#), as necessary – refer to section E.2.5.2 [Communication, consultation, participation and reporting](#).

[Prospect and risk assessment](#) should consider intended and unintended consequences of all [significant structures](#) and [processes](#). It assists personnel acting individually or in teams to [creatively identify](#) and evaluate alternative [options](#) and associated [risks](#) to facilitate [creative innovative](#) thinking. [Prospect and risk assessment](#) facilitates the defining and implementing physical and administrative controls [designed](#) to improve the [prospect](#) of the [organisation](#) being more successful and the reduction of [risk](#)

It is also essential to [communicate organisation](#) and [project prospects and risks](#) prior to personnel performing [processes](#).

[Prospect and risk](#) pervade [structures](#) and [processes](#) relating to an [organisation's](#):

- [Strategy](#), [tactics](#) and [operations](#),
- Internal and external [environment](#),
- People, [commerce](#), [data](#), matter and energy, and [suppliers](#),
- [Stakeholder needs](#) and [expectations](#) including conflicts.

It is important that the approach used is appropriate and that the [required resource](#) is appropriate to the potential for the [structure](#) and/or [process](#) to provide [value](#) to or negatively [impact stakeholders](#). This ensures that the best use is made of the [management resource](#) in providing the maximum [value](#) in return for the effort expended.

A wide range of [management tools](#) and techniques are [available](#) to guide [prospect and risk assessment processes](#). See also section E.1.8 [Management tools and techniques](#).

A [prospect and risk assessment](#) general approach is shown in Figure 10: Prospect and Risk Assessment Cycle. **Error! Reference source not found.** The cycle of [prospect and risk planning](#), [identification](#), [analysis](#), assigning of controls and their acceptance should be repeated until an acceptable level of [residual prospect and risk](#) is achieved.

Intelligent [threats](#) present a special challenge for [prospect and risk management](#) because the source of the [threat](#) may change when the person(s) has [knowledge](#) of the proposed or implemented [prospect and/or risk controls](#). The source of an intelligent [threat](#) could be a criminal or a competitor. The [threat](#) can be external or internal to the [organisation](#). See also section E.4.2.10 [Access](#). Ideally, [structures](#) and [processes](#) should be intrinsically [safe](#) and not rely on engineered or administrative controls to reduce [risk](#)

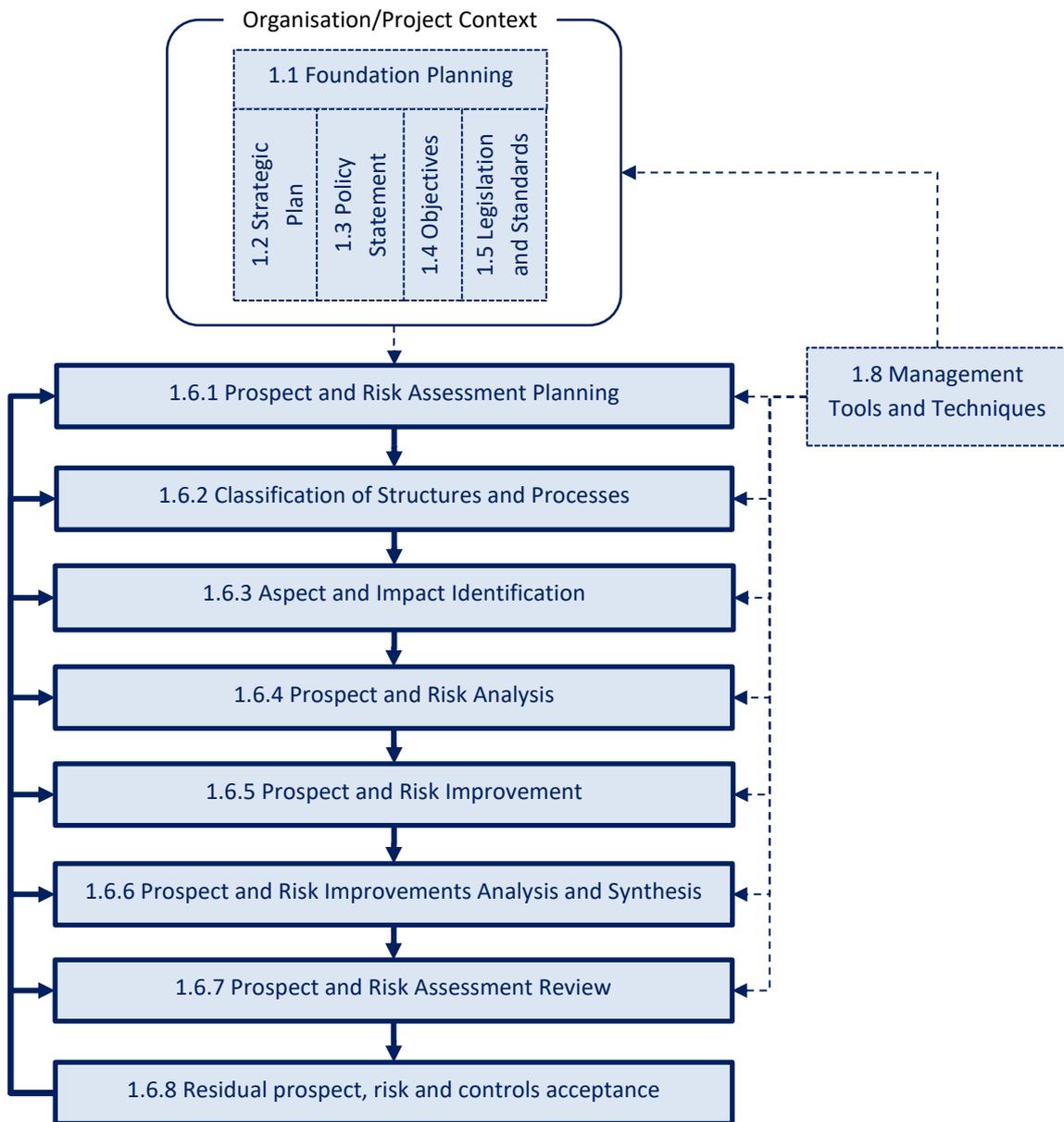


Figure 10: Prospect and Risk Assessment Cycle

### E.1.6.1. Prospect and risk assessment planning

≤ The role of [planning](#) within [prospect and risk assessment](#) as a whole is shown in Figure 10: Prospect and Risk Assessment Cycle. Careful [planning](#) of the [prospect and risk assessments](#) is important to ensure that appropriate methodologies are applied with an appropriate degree of rigour, by [competent](#) personnel, for each [aspect](#) of the [organisation's structures](#) and [processes](#) – refer to [Appendix 6: General Aspects of an Organisation](#). This helps achieve the greatest degree of [management control](#) for the amount of resource expended.

The degree of application of [prospect and risk assessment](#) can only be justified by the degree that it may facilitate improved [management](#) control and the adding of [value](#) to the various facets of [organisation performance](#). [Prospect and risk assessment](#) should therefore not be applied blindly or

ritualistically but with good judgement and common sense. In addition to the [aspects](#) that the [organisation](#) can control directly, it needs to [determine](#) whether there are [aspects](#) that it can indirectly influence. These may be related to [goods](#) and [services](#) used by its [suppliers](#), as well as [goods](#) and [services](#) that it delivers to others external to the [organisation](#). Irrespective, it is the [organisation](#) that should [determine](#) the degree of control and influence that it is able to exercise over its [aspects](#) and [impacts](#).

[Prospect and risk assessment planning processes](#) should address the appropriate selection and application of specific [management tools](#) and techniques to ensure that they add value when used in appropriate circumstances – refer to section E.1.8 [Management tools and techniques](#). These may potentially include:

- ❖ [Aspect and impact questionnaires](#)
- ❖ [Bayesian statistics](#)
- ❖ [Boston grid](#)
- ❖ [Bowtie](#)
- ❖ [Cause and effect analysis](#)
- ❖ [Check sheets](#)
- ❖ [Cost benefit analysis](#)
- ❖ [Data handling and display](#)
- ❖ [Decision tree](#)
- ❖ [Delphi technique](#)
- ❖ [Event tree analysis](#)
- ❖ [Expected value method](#)
- ❖ [Failure mode and effects analysis](#)
- ❖ [Failure prevention analysis](#)
- ❖ [Flow chart](#)
- ❖ [Focus groups](#)
- ❖ [Gap analysis](#)
- ❖ [Hazard and operability study](#)
- ❖ [Heat maps](#)
- ❖ [Hierarchical task analysis](#)
- ❖ [Infrastructure tour](#)
- ❖ [Icam-definition](#)
- ❖ [Interviews](#)
- ❖ [Latin hypercube](#)
- ❖ [Line graph](#)
- ❖ [Matrix diagram](#)
- ❖ [Monti carlo analysis](#)
- ❖ [Nominal group technique](#)
- ❖ [Pareto analysis](#)
- ❖ [Pareto charts](#)
- ❖ [Political, economic, sociological, technological, legislation and environment analysis](#)
- ❖ [Probability and consequence grid/diagrams](#)
- ❖ [Probability trees](#)
- ❖ [Process decision program chart](#)
- ❖ [Process flow charts](#)
- ❖ [Profile graphs](#)
- ❖ [Project profile model](#)
- ❖ [Prospect and/or risk mapping and profiling](#)

- ❖ [Prospect and/or risk modelling and risk simulation](#)
- ❖ [Prospect and/or risk register/database](#)
- ❖ [Prospect and/or risk workshop](#)
- ❖ [Qualitative prospect and/or risk assessment](#)
- ❖ [Quantified prospect and/or risk assessment](#)
- ❖ [Rag status reports](#)
- ❖ [Ranking and rating](#)
- ❖ [Relations diagram](#)
- ❖ [Risk breakdown structure](#)
- ❖ [Risk checklists/prompt lists](#)
- ❖ [Scatter diagram](#)
- ❖ [Sensitivity analysis](#)
- ❖ [Solution effect analysis](#)
- ❖ [Strengths weaknesses, opportunities and threats analysis](#)
- ❖ [Stress testing](#)
- ❖ [Surveys](#)
- ❖ [Tables](#)
- ❖ [Tree diagram](#)
- ❖ [Uncertainty analysis](#)
- ❖ [Utility theory](#)
- ❖ [Value analysis](#)
- ❖ [Visualization techniques](#)
- ❖ [Voting](#)
- ❖ [Waterfall charts](#)
- ❖ [Why – why diagrams](#)

The following specialist [management tools](#) and techniques may be used to analyse factors impacting human performance:

- ❖ [Absolute probability judgment](#)
- ❖ [Human cognitive reliability method](#)
- ❖ [Human error assessment and reduction technique](#)
- ❖ [Influence diagram approach](#)
- ❖ [Paired comparisons](#)
- ❖ [Success likelihood index method](#)
- ❖ [Technique for human error rate prediction](#)
- ❖ [Tecnica empirica stima error operator](#)

### Application to all aspects of performance

[Prospect and risk assessments](#) should consider all [aspects](#) of [performance](#) including personnel, [commercial](#), [data](#), matter, energy, [suppliers](#), normal and [contingency structures](#) and [processes](#), change, reputation and [security](#) etc., and attempt to [equitably](#) balance the [needs](#) and [expectations](#) of [customers](#) and other [stakeholders](#) while making the best use of [resources](#). This requires that [conflicting stakeholders' needs](#) and [expectations](#) are [systematically](#) identified and where possible resolved or optimised by applying [creative](#) or [innovative](#) solutions. Standard methodologies may help in facilitating this [process](#) – refer to section E.1.8 [Management tools and techniques](#).

General and specialist [prospect and risk assessments](#) should be selected and used depending on the [structures](#) and [processes](#) of the [organisation](#). Specialist [risk assessments](#) typically cover issues such as:

- Personnel [stress](#),
- [Contracts](#),
- [Projects](#),
- [Hazardous](#) substances,
- Special classes of person such as those with disabilities, young persons, pregnant women, nursing mothers,
- Rehabilitation of persons after long-term absence due to sickness etc.,
- Noise or vibration,
- Manual handling,
- Suitability of personal protective equipment,
- Confined spaces,
- Special classes of persons covered in section E.2.4.4.4 [Fitness](#).

### Legal assessment requirements

The conduct of [prospect and risk assessments](#) is often influenced by applicable legislation or standards as per section E.1.5 [Legislation and standards](#). However, these [requirements](#) should be exceeded where necessary to ensure that the [organisation's](#) and [stakeholder's objectives](#) are optimized.

### Selection of management tools

The [organisation](#) should select from the wide range of [management tools](#) and techniques that are [available](#) to help in guiding [prospect and risk assessment processes](#) – refer to section E.1.8 [Management tools and techniques](#) and [Appendix 4: Management Tools and Techniques](#). [Prospect and risk assessment](#) methodologies should only be adopted and used to a degree that adds [value](#).

### Stakeholder specific assessment requirements

[Prospect and risk](#) acceptance [criteria](#) needs to take account of the [prospect](#) of gain and the [risk](#) of loss such that these are acceptable to [stakeholders](#) and take account of concepts such as; 'As Low as Reasonably [practicable](#) (ALARP)', '[Risk tolerability](#)', the '[Precautionary Principle](#)', '[Best Available Technique](#) (BAT)' and '[Best Practicable Environmental Option](#) (BPEO)' etc. [appropriate](#) to the [organisation](#) and industry sector. Where conflicts arise between the [needs](#) and [expectations](#) of [stakeholders](#), [management creativity](#) should be applied to [identify prospects](#) for their potential resolution.

### Scope of application of prospect and risk assessments

The following are typical elements of an [organisation's](#) [structures](#) and [processes](#) that [need strategic, tactical](#) and [operational prospect and risk assessments](#) and span all of the [organisations](#) multiple facets of [performance](#):

- Personnel including [stress](#),
- [Commerce](#),
- [Data](#),
- Matter and energy including [infrastructure](#) and materials,
- [Goods](#) and [services supply chain](#),

- [Goods](#) and [services delivery chain](#),
- [Contingency arrangements](#),
- Temporary and permanent change including experiments.

### Integrated prospect and risk assessments

The [organisation](#) should decide if it wishes to integrate any of the [prospect and risk assessments](#), either individually or collectively, with respect to [goods](#) and [services quality](#), [health](#), [safety](#), [environment](#), [commerce](#) etc. e.g. dust [created](#) during a [process](#) may [impact goods](#) and [service quality](#), [health](#), [safety](#) and [environment](#).

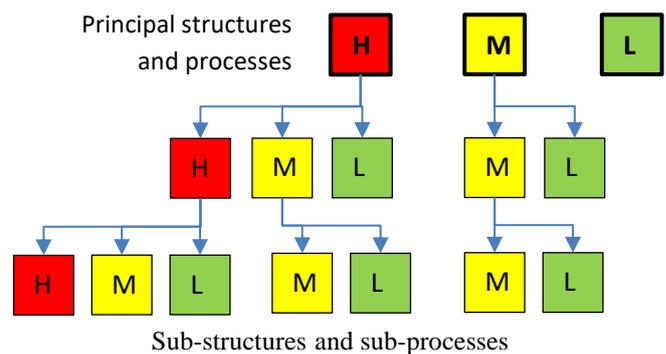
### Collective impact of common behaviours

An [organisation's aspects](#) that have a potential to collectively cause external [impacts](#) typically include [environmental aspects](#) such as [emissions](#) to air, releases to water, releases to land, use of raw materials and natural [resources](#), use of energy, energy and generation of [waste](#) and by-products. Although an [organisation's behaviour](#) considered in isolation may have a limited and often negligible [impact](#), if considered collectively with similar [behaviour](#) in other [organisations](#) the overall [impact](#) can be [highly significant](#) locally or even globally. This is why the individual [behaviour](#) of the [organisation](#) must be assessed as a collective shared [behaviour](#).

#### E.1.6.2. Classification of structures and processes

≤ The [classification](#) of physical and non-physical [structures](#) and [processes](#) according to their potential [impact](#) perceived [stakeholder needs](#) and [expectations](#) allows controls to be appropriately applied to [prospect and risk assessment processes](#) i.e. more sophisticated and rigorous assessments would be applied to structures and processes with a higher perceived potential to [impact stakeholder needs](#) and [expectations](#). The [process](#) assists applying graded [management](#) control resulting in [effective](#) and [efficient](#) use of [management resource](#).

An example of a [classification system](#) using high, medium and low is provided in [Appendix 2: Classification of Structures and Processes Example](#). The [system](#) takes account of the [risks](#) directly associated with the [system](#) and the potential for [mismanagement](#) due to its complexity or novel features beyond the experience of the [organisation](#).



**Figure 11: Risk Classification**

After an initial [classification](#) of the principal [structures](#) and [processes](#), some of the sub-[structures](#) and sub-[processes](#) may be [classified](#) at lower [classifications](#) where applicable as shown by the hierarchical [structure](#) in Figure 11: Risk Classification. The principal may be applied right down to the [atomic](#) level of [structures](#) and [processes](#). This allows [management resource](#) to be used [economically](#) by focusing on [structures](#) and [processes](#) according to their perceived [impact](#) rather than applying the same degree of [management](#) attention to all [structures](#) and [processes](#).

[Classifying structures](#) according to the degree that they have the potential for loss and gain helps to [systematically](#) apply appropriate [management control](#). Any [classified structure](#) or [process](#) requires a [defined](#) level of [competent](#) manager, rigor of [prospect and risk assessment](#), and [monitoring](#) etc. It also helps [prospect and risk assessment](#) to be accepted as sensible and valuable.

See also section E.6.1 [Classification, vetting and control](#).

### E.1.6.3. Aspect and impact identification

≤ The role of aspect and impact identification within [prospect and risk assessment](#) is shown in Figure 10: Prospect and Risk Assessment Cycle. **Error! Reference source not found.** [Prospects](#) of fulfilling the [purpose](#) of the [organisation](#) or [project](#) or [structure](#) or [process](#) while [equitably](#) satisfying [stakeholder needs](#) and [expectations](#) should be identified. This should be achieved via [creative innovative](#) thinking conducted individually or in teams using appropriate methodologies – refer to section E.1.8 [Management tools and techniques](#). The intended and unintended consequences of each [prospect](#) should be identified.

[Prospect and risk identification processes](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Aspect and impact questionnaires](#)
- ❖ [Boston grid](#)
- ❖ [Cause and effect analysis](#)
- ❖ [Check sheets](#)
- ❖ [Delphi technique](#)
- ❖ [Failure mode and effects analysis](#)
- ❖ [Failure prevention analysis](#)
- ❖ [Flow chart](#)
- ❖ [Focus groups](#)
- ❖ [Gap analysis](#)
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- ❖ [Political, economic, sociological, technological, legislation and environment analysis](#)
- ❖ [Probability and consequence grid/diagrams](#)
- ❖ [Probability and consequence grid/diagrams](#)
- ❖ [Process decision program chart](#)
- ❖ [Process flow charts](#)
- ❖ [Project profile model](#)
- ❖ [Prospect and/or risk mapping and profiling](#)
- ❖ [Prospect and/or risk register/database](#)
- ❖ [Prospect and/or risk workshop](#)
- ❖ [Relations diagram](#)
- ❖ [Risk breakdown structure](#)

- ❖ [Scatter diagram](#)
- ❖ [Strengths weaknesses, opportunities and threats analysis](#)
- ❖ [Stress testing](#)
- ❖ [Surveys](#)
- ❖ [Tables](#)
- ❖ [Tree diagram](#)
- ❖ [Visualization techniques](#)
- ❖ [Why – why diagrams](#)

#### E.1.6.4. Prospect and risk analysis and synthesis

≤ The role of [analysis](#) and [synthesis](#) within [prospect and risk assessment](#) as a whole is shown in Figure 10: Prospect and Risk Assessment Cycle. **Error! Reference source not found.** The intended and unintended consequences of existing or proposed [structures](#) and [processes](#) should be [analysed](#) and [synthesized](#) using appropriate [prospect and risk assessment](#) methodologies – refer to section E.1.8 [Management tools and techniques](#) and [Appendix 4: Management Tools and Techniques](#).

The application of [analysis](#) and [synthesis](#) ensures that the individual and collective [impact](#) of elements is addressed contributing to [prospects](#) and [hazards](#).

Attempts should always be made to meet [stakeholder needs](#) and [expectations](#) via [creative innovative](#) thinking conducted individually or in teams.

[Prospect and risk assessments](#) should be [recorded](#) using [prospect and risk registers](#) or other suitable [database](#). This may be in the [organisations](#) own format or that supplied by a [stakeholder](#) which also satisfies the [organisation's requirements](#). A [stakeholder](#) format should not be adopted that does not satisfy the [organisation's requirements](#), which can also be [required](#) by legislation.

An example of a universal [prospect and risk rating system](#) for the conduct of integrated [prospect and risk assessments](#) is provided in [Appendix 3: Prospect and Risk Rating System Example](#).

[Expert](#) advice should be sought for the selection and application of numeric [prospect and risk assessment](#) tools and methodologies which should be used by [competent](#) personnel – refer to sections E.2.3 [Provision of expert advice and assistance](#) and E.2.4.4 [Competence](#).

[Prospect and risk analysis and synthesis processes](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Bayesian Statistics](#)
- ❖ [Boston Grid](#)
- ❖ [Bowtie Cause and Effect Analysis](#)
- ❖ [Check Sheets](#)
- ❖ [Cost Benefit Analysis](#)
- ❖ [Data Handling and Display](#)
- ❖ [Decision Tree](#)
- ❖ [Delphi Technique](#)
- ❖ [Event Tree Analysis](#)
- ❖ [Expected Value Method](#)

- ❖ [Gap Analysis](#)
- ❖ [Heat Maps](#)
- ❖ [Latin Hypercube](#)
- ❖ [Matrix Diagram](#)
- ❖ [Monti Carlo Analysis](#)
- ❖ [Nominal Group Technique](#)
- ❖ [Pareto Analysis](#)
- ❖ [Pareto Charts](#)
- ❖ [Political, Economic, Sociological, Technological, Legislation and Environment Analysis](#)
- ❖ [Probability Trees](#)
- ❖ [Process Decision Program Chart](#)
- ❖ [Prospect and/or Risk Mapping and Profiling](#)
- ❖ [Prospect and/or Risk Modelling and Simulation](#)
- ❖ [Prospect and/or Risk Register/Database](#)
- ❖ [Prospect and/or Risk Workshop](#)
- ❖ [Qualitative Prospect and/or Risk Assessment](#)
- ❖ [Quantified Prospect and/or Risk assessment](#)
- ❖ [RAG Status Reports](#)
- ❖ [Ranking and Rating](#)
- ❖ [Risk Breakdown Structure](#)
- ❖ [Scatter Diagram](#)
- ❖ [Sensitivity Analysis](#)
- ❖ [Solution Effect Analysis](#)
- ❖ [Stress Testing](#)
- ❖ [Tables](#)
- ❖ [Uncertainty Analysis](#)
- ❖ [Value Analysis](#)
- ❖ [Waterfall Charts](#)

#### E.1.6.5. Prospect and risk improvement

≤ The role of [prospect and/or risk improvement](#) within [prospect and risk assessment](#) is to increase [prospect](#) and/or reduce [risk](#). Its part in [prospect and risk assessment](#) as a whole is shown in Figure 10: Prospect and Risk Assessment Cycle. **Error! Reference source not found.. Error! Reference source not found.** [Prospect and risk controls](#) may be engineered into [structures](#) and [processes](#) or may be administrative and form part of the [management system](#).

It should be noted that the [effectiveness](#) of [risk](#) controls associated with an intelligent [threat](#) will to a large extent be dependent on the relative [effectiveness](#) of [risk](#) reduction barriers compared with those of other [organisations](#) – the perceived softer target will naturally be selected. A self-serving irresponsible individual or [organisation](#) will tend to seek out weaknesses in [risk barriers](#) and the [organisations](#) with the weaker barriers will be the most vulnerable as they are selected preferentially to [organisations](#) with more [robust risk barriers](#).

Taking account of the [uncontrolled prospect and/or risk analysis](#) and [synthesis](#), attempts should be made to [improve prospects and/or risks](#) by the application of engineered or administrative controls to achieve a [tolerable](#) or [excellent](#) level. [Risk](#) should be reduced to a level that is [low](#) or otherwise [tolerable](#) and definitely not [unacceptable](#). [Prospect and/or risk controls](#) should be applied that are appropriate to the assessed level of [prospect and/or risk](#) respectively. [Prospect and risk controls](#)

should take account of relevant legislation and codes of good practice – refer to section E.1.5 [Legislation and standards](#). Selection of [prospect and risk controls](#) should take account of a [prospect](#) enhancement and [risk](#) reduction hierarchy such as the following:

- Elimination,
- Substitution,
- Transfer, share, cooperate,
- Engineered controls (includes computer [system](#) embedded rules),
- Administrative controls ([competence](#), [training](#), [procedures](#), signage, [conventions](#) etc.)
- [Personal protective equipment](#) ([health](#) and [safety](#)),
- [Contingency arrangements](#) – refer to section 0 [Contingency Structures and Processes](#).

[Risk](#) of [environmental pollution](#) may be prevented or reduced by source reduction or elimination, [structure](#) or [process](#) change, [efficient](#) use of matter and energy including substitution, reuse, recovery, recycling, reclamation and treatment and [contingency arrangements](#).

[Redundancy](#), [diversity](#), [segregation](#) and limiting the size of inventory may be used to increase [prospect](#) and/or reduce [risk](#) in the [design](#) of [structures](#) and [processes](#).

[Risk](#) may be considerably reduced by employing multiple [diverse](#) physical or administrative [protective barriers](#) known as [defense in depth](#). However, multiple [prospect/risk barriers](#) have the potential to fail via [common cause failure](#). Personnel can be a typical source of [common cause failure](#) e.g. the same person may [operate](#), [maintain](#) or malevolently interfere with the intended independent [diverse](#) barriers. This type of [risk](#) may be reduced by disallowing a single person to perform critical [actions](#) and to minimise the possibility of group conspiracies. See also section E.5.4.5 [Access, egress and protective barriers](#).

[Commercial prospects](#) may be increased or [risks](#) may be reduced through [redundancy](#) so that for example the [organisation](#) is not unduly dependent on a single customer or [supplier](#) respectively and also through [diversity](#) where for example supply of a [good](#) or [service](#) would not fail because of a common cause. Regulation is often used to reduce the dominance of large powerful. This [MSS](#) has been created by focusing on first [principles](#) rather than a superposition of existing [management system](#) standards. It has been attempted to design the [MSS](#) so that it is both elegant and functional. The first issue of this standard in 2014 took account of 17 guiding [principles](#) contained in this section of the standard. These have since been extended and published in the IMC Paper: Integrated Management Definition and Elaboration. Optimal [synergistic](#) benefit will be received if the [principles](#) are applied collectively rather than in isolation.

which may [inequitably](#) act against [stakeholder needs](#) and [expectations](#) and may also present an [unacceptable risk](#) should they fail because of their size. Governments may also act to stop the [failure](#) of large [organisations](#) believing them to be of such [strategic](#) importance that they are too large to fail.

Where [significant risk mitigation](#) may be achieved following an [event](#), [arrangements](#) should be developed as [required](#) in section 0 [Contingency Structures and Processes](#).

[Residual prospect and risk](#) must be [low](#) or [tolerable](#) as judged by [stakeholders](#). [Expert](#) advice should be sought if this is in doubt.

Selection of [prospect and/or risk controls](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Bowtie Cause and Effect Analysis](#)
- ❖ [Cost Benefit Analysis](#)
- ❖ [Decision Tree](#)
- ❖ [Heat Maps](#)
- ❖ [Monti Carlo Analysis](#)
- ❖ [Process Decision Program Chart](#)
- ❖ [Profile Graphs](#)
- ❖ [Prospect Assessment](#)
- ❖ [Prospect and/or Risk Mapping and Profiling](#)
- ❖ [Prospect and/or Risk Modelling and Simulation](#)
- ❖ [Prospect and/or Risk Register/Database](#)
- ❖ [Prospect and/or Risk Workshop](#)
- ❖ [RAG Status Reports](#)
- ❖ [Ranking and Rating](#)
- ❖ [Checklists](#)
- ❖ [Stress Testing](#)
- ❖ [Tables](#)
- ❖ [Utility Theory](#)
- ❖ [Value Analysis](#)
- ❖ [Voting](#)
- ❖ [Waterfall Charts](#)

#### **E.1.6.6. Prospect and risk improvements analysis and synthesis**

≤ The role of [prospect and/or risk analysis and synthesis](#) following [prospect and/or risk improvement](#) within [prospect and risk assessment](#) as a whole is shown in Figure 10: Prospect and Risk Assessment Cycle. **Error! Reference source not found.** It is conducted to determine the [residual prospects and risks](#) and to provide [data](#) to establish how much [prospect and/or risk improvement](#) has been achieved. If the [prospect and/or risk controls](#) are [ineffective](#) the [organisation/project/task](#) etc. may be exposed to the [uncontrolled prospect and/or risk](#).

#### **E.1.6.7. Prospect and risk assessment review**

≤ The role of [prospect and risk assessment review](#) as part of [prospect and risk assessment as a whole](#) is shown in Figure 10: Prospect and Risk Assessment Cycle. **Error! Reference source not found.** It is important that [prospect and risk assessments](#) remain relevant and fit for [purpose](#). When the circumstances change is an obvious trigger for a [review](#) but a [policy](#) for periodic [review](#) is [required](#) because changes in the circumstances may have occurred and have remained unrevealed or not acted upon. New [opportunities](#) for [prospect and risk controls](#) may also have occurred through technological or other [innovation](#).

### E.1.6.8. Residual prospect, risk and controls acceptance

≤ The role of [residual prospect and risk](#) and associated [controls](#) acceptance within overall [prospect and risk assessment](#) is shown in Figure 10: Prospect and Risk Assessment Cycle **Error! Reference source not found.**

The designated [responsible](#) manager should be confident that the [prospect and/or risk assessment](#) has been conducted according to the [organisation's](#) approved [arrangements](#) making use of [expert](#) advice and support [as appropriate](#). [Prospect and risk controls](#) should be capable of [effective](#) and [efficient planned monitoring](#) – refer to section 0 [Planned Monitoring](#).

It should be noted that there is normally limited [knowledge](#) when it comes to rare or novel [events](#) with serious consequences due to the rarity of the occurrence of such [events](#). In such circumstances the [organisation](#) should apply the [precautionary principle](#) to ensure that there is sufficient [knowledge](#) of the associated [prospect and risk](#) to justify a proposal – see section E.1.7 [Performance justification](#).

The degree and criticality of the [prospect and risk controls](#) should influence the [planned monitoring](#) associated with [structures](#) and [processes](#) – refer to section 0 [Planned monitoring](#).

[Management arrangements](#) implementing the remaining main sections of this standard should take account of [prospect and risk assessments](#). Some [prospect and risk controls](#) include [contingency arrangements](#), which are covered in section E.7.2 [Contingencies](#).

### E.1.7. Performance justification

≤ [Stakeholders](#) may also require [organisations](#) to produce a [structure](#) and/or [process](#) justification, e.g. [safety](#) cases for major [hazard](#) industrial plants, justification of [measurement processes](#) in laboratories and submissions to [planning](#) or licensing [authorities](#). These generally constitute a [structured](#) argument supported by evidence to provide a [required](#) level of [stakeholder](#) confidence.

[Responsibilities](#) and [arrangements](#) need to be [defined](#) for ensuring that the [performance](#) justifications remain current and legitimate.

[Performance](#) justifications are often contained in [design](#) dossiers, [project](#) files, [safety](#) cases, [planning](#) applications etc. and typically include '[prospect and risk assessments](#)', '[Structure and process definitions](#)', [test data](#) and research findings etc. and specific [requirements](#) to be demonstrated for a regulator – refer to sections E.1.6 [Prospect and risk assessment](#), 0 [Normal Structures and Processes](#) and 0 [Contingency Structures and Processes](#).

### E.1.8. Management tools and techniques

≤ A very large number of deterministic and statistical [management tools](#) and techniques are [available](#) for improving [structures](#) and [processes](#), helping to [manage under uncertainty](#) and to aid the control of [processes](#) (e.g. [statistical process control](#)). The [organisation](#) should [identify](#) those that have been selected for use and the circumstances in which they should be used. It is important that personnel using the techniques are [competent](#) as covered in section E.2.4.4 [Competence](#).

[Management tools](#) and techniques are, in principle, applicable to the [management](#) of any type of [performance](#) provided that the use is appropriate to the circumstances and [objective](#). They are

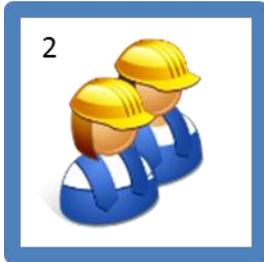


designed to be used individually and/or in groups. They are particularly relevant to the following [MSS](#) sections:

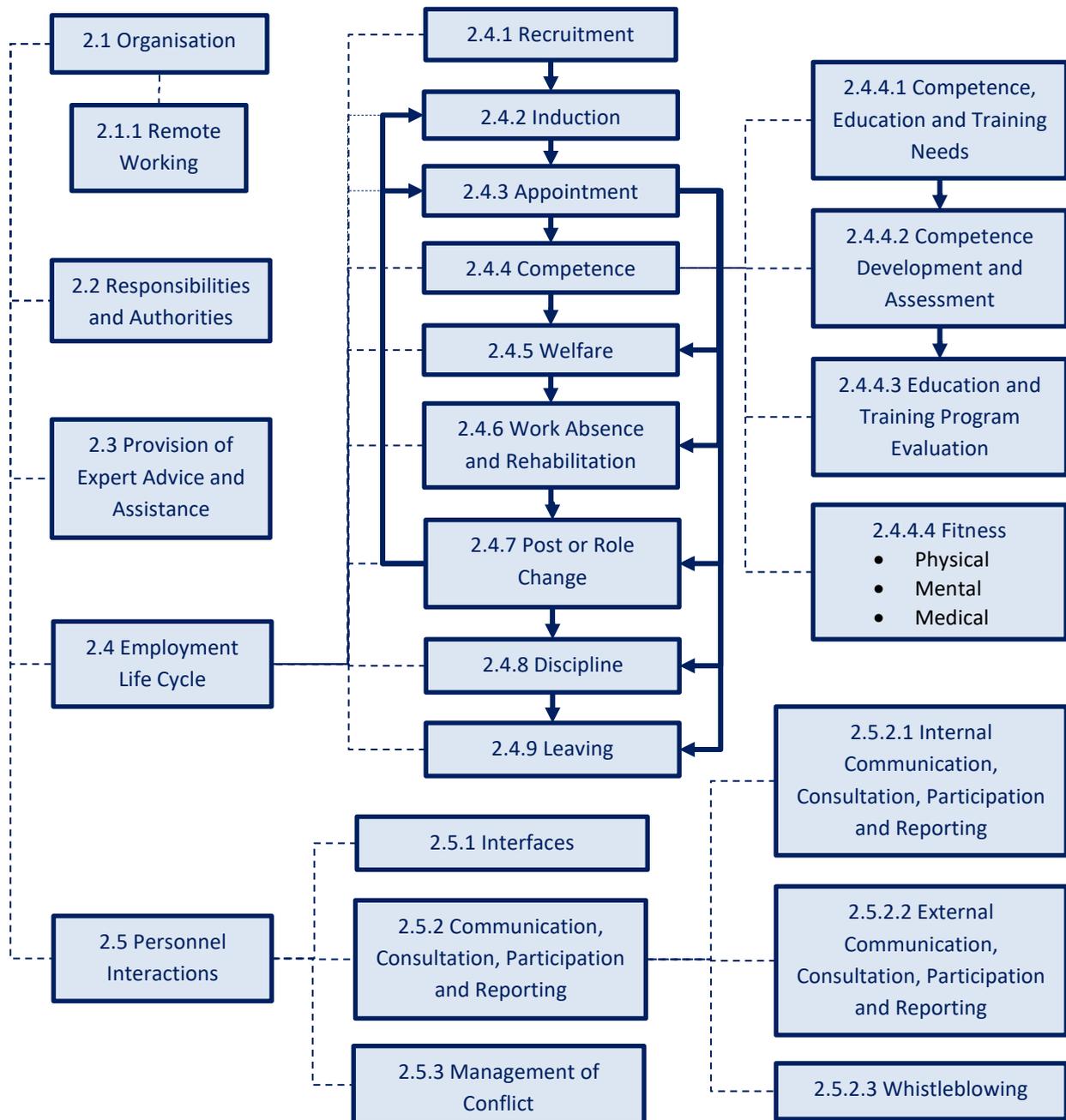
- C.1 [Assessment and Development of Controls](#), E.1
- C.3.2 [Marketing](#), E.3.2
- C.3.3.3 [Contract implementation](#), E.3.3.3
- C.4.3 [Data Processing](#), E.4.3
- C.4.4 [Conventions](#), E.4.4
- C.7.1 [Structure and process design and development](#), E.7.1
- C.8.1 [Contingency planning](#), E.8.1
- 0 [Change](#), 0
- 0 [Reactive Investigation](#), 0
- C.11.1 [Monitoring planning](#), E.11.1
- 0 [Review and Action](#), 0

A non-exhaustive list is provided in [Appendix 4: Management Tools and Techniques](#).

## E.2. Personnel



Personnel are the most important [asset](#) of any [organisation](#) and this section covers their [management](#) including: [organisation](#), [responsibilities](#), [authorities](#), [communications](#), [stakeholders](#), conflict resolution and the complete employment [life cycle](#) from recruitment through to leaving. It contains the [management](#) of some high-[risk](#) issues that [organisations](#) have to be addressed such as recruitment and ensuring that people are [competent](#) for their [posts](#) and [roles](#).



**Figure 12: Personnel Subsections**

## E.2.1. Organisation

≤ An [organogram](#) is commonly used to [define](#) an [organisation's structure](#).

Cross functional groups may be established to focus on the solving of particular problems or to bring about a particular type of improvement. [Organisation](#) should also be established for maintaining and continually improving the [management system](#), which is one of its most valuable [assets](#) – see also section E.12.2 [Review](#) and [Appendix 8.2 Project Organisation](#).

### E.2.1.1. Remote working

≤ Remote working may include:

- a) Working at home or another remote location including [teleworking](#),
- b) Travelling between locations,
- c) Working within another organisation.

See also sections E.5.4.2 [Work environment](#) and E.5.4.3.4 [Data equipment](#).

## E.2.2. Responsibilities and authorities

≤ [Responsibilities](#) and [authorities](#) within the [management system](#) should generally be [defined](#) for [posts](#) and [roles](#) rather than a named person to avoid amendment when there are staff changes. A [schedule](#) should be [maintained](#) showing staff and deputies for each [post](#) and [role, as applicable](#). Refer to section C.4.1 [Management system structure](#).

[Job descriptions](#) may be stand-alone [documents](#) or included as part of other [documents](#). The ability to separately print [job descriptions](#) is useful to be able to send to potential applicants during the recruitment [process](#).

[Job descriptions competency](#) may reference the [competency schedule](#) to avoid reissue when [competency requirements](#) are revised – refer to E.2.4.4 [Competence](#).

[Responsibilities](#) and [authorities](#) should typically include, [as applicable](#):

- [Management](#) of the [management system](#),
- [Planning](#) and performing of [prospect and risk assessment](#) and the acceptance of [residual prospect and risk](#),
- [Structure and process ownership](#),
- [Commerce](#),
- Setting and agreeing the [planned monitoring](#) program,
- [Project management](#),
- Initiating and [managing](#) change,
- Conduct of [reactive investigation](#) and [planned monitoring](#),
- [Management review](#).

The content of [job descriptions](#) constitutes administrative [prospect and risk controls](#) and should take account of potential [human error](#) and [violation](#). An individual's [responsibility](#) and [authority](#) e.g. should be linked to the [classification](#) of [structures](#) and [processes](#) – refer to section E.1.6.1 [Prospect and risk assessment planning](#) and [Appendix 2: Classification of Structures and Processes Example](#).

The degree that personnel are empowered to optimise the functionality of the [organisation](#) will depend on the complexity of [structures](#) and [processes](#), the distribution of [competency](#) and [risks](#) associated with the delivery of [goods](#) and [services](#). Personnel and [operational](#) teams as far as [practicable](#) should be self-administering with an appropriate degree of supervision and [monitoring](#) commensurate with the [opportunities](#) and [risks](#).

[Authority](#) should prevent a person acting in isolation of others in critical decision-making and the signing of major [contracts](#) etc. – refer to section E.3.3.1 [Pre-Contract](#).

[Responsibility](#) and [authority](#) for [covert arrangements](#) may be [covert](#).

### E.2.3. Provision of expert advice and assistance

< [Expert](#) advice and assistance may be sourced within the [organisation](#) or externally. Refer to Table 1: Aid for identifying expert advice and support needs. Not every cell in the table will necessarily be relevant to an [organisation](#).

|                                |  | Strategy | Tactics | Operations | Structure and Process |                   |             |          |         |        |   |
|--------------------------------|--|----------|---------|------------|-----------------------|-------------------|-------------|----------|---------|--------|---|
|                                |  |          |         |            | goods/service quality | Health and safety | Environment | Security | Finance | Other? |   |
| Standard Specific Requirements | 1 <a href="#">Assessment and Development of Controls</a> | ?        | ?       | ?          | ?                     | ?                 | ?           | ?        | ?       | ?      | ? |
|                                | 2 <a href="#">Personnel</a>                              | ?        | ?       | ?          | ?                     | ?                 | ?           | ?        | ?       | ?      | ? |
|                                | 3 <a href="#">Commerce</a>                               | ?        | ?       | ?          | ?                     | ?                 | ?           | ?        | ?       | ?      | ? |
|                                | 4 <a href="#">Data</a>                                   | ?        | ?       | ?          | ?                     | ?                 | ?           | ?        | ?       | ?      | ? |
|                                | 5 <a href="#">Matter and Energy</a>                      | ?        | ?       | ?          | ?                     | ?                 | ?           | ?        | ?       | ?      | ? |
|                                | 6 <a href="#">Suppliers</a>                              | ?        | ?       | ?          | ?                     | ?                 | ?           | ?        | ?       | ?      | ? |
|                                | 7 <a href="#">Good and Service Delivery</a>              | ?        | ?       | ?          | ?                     | ?                 | ?           | ?        | ?       | ?      | ? |
|                                | 8 <a href="#">Contingencies</a>                          | ?        | ?       | ?          | ?                     | ?                 | ?           | ?        | ?       | ?      | ? |
|                                | 9 <a href="#">Change</a>                                 | ?        | ?       | ?          | ?                     | ?                 | ?           | ?        | ?       | ?      | ? |
|                                | 10 <a href="#">Reactive investigation</a>                | ?        | ?       | ?          | ?                     | ?                 | ?           | ?        | ?       | ?      | ? |
|                                | 11 <a href="#">Planned monitoring</a>                    | ?        | ?       | ?          | ?                     | ?                 | ?           | ?        | ?       | ?      | ? |
|                                | 12 <a href="#">Review and Action</a>                     | ?        | ?       | ?          | ?                     | ?                 | ?           | ?        | ?       | ?      | ? |

Table 1: Aid for identifying expert advice and support needs

### E.2.4. Employment life cycle

< The [arrangements](#) should cover directly employed and [contracted](#) personnel working part or full time in whatever way.

Employment legislation should be complied with throughout and [records](#) generated to demonstrate compliance – refer to sections E.1.5 [Legislation and standards](#) and E.4.2.9 [Records](#).

#### **E.2.4.1. Recruitment**

≤ Recruitment is a potentially high [prospect and risk process](#) unless it is [effectively](#) controlled and [prospect and/or risk based](#) or [prospect and/or risk informed](#).

A copy of the [job description](#), application [form](#) and a self-[certification](#) medical questionnaire should be sent to each potential applicant.

Applications should be collated, objectively [analysed](#) and a short list for interviewing compiled.

Standard interview letters should be sent to all shortlisted candidates by [recorded](#) delivery.

Interview panels should include managers who will be directly [responsible](#) for the recruited personnel. The same question set should be used for all interviewees. Each interviewer should make clear notes with respect to each question and the reasons for wishing to accept or reject the applicant. Interview [records](#) should provide a clear justification for the appointment and rejection of personnel.

It is important that references are sought by letter or phone and key qualifications are confirmed as valid by the issuing body.

All candidates should be notified of the result and the unsuccessful candidates thanked for their participation.

#### **E.2.4.2. Induction**

≤ Ensuring that persons doing work under the organisation's control are actively involved is critical to the [success](#) of the [management system](#). In particular, the participation of the [organisation's employees](#) and the level of information provided to them are key factors to the achievement of compliance and continual improvement of both the [management system](#) and overall [performance](#) of the [organisation](#).

The [policy](#) commitments need to be memorized and persons doing work under the [organisation's](#) control do not need to have a copy of the actual [policy document](#) – however, they should be aware of its existence, its [purpose](#) and their [role](#) in achieving the commitments.

It is very important that new recruits are properly supervised until their induction has been completed.

Interactive discussion should be encouraged during the explaining of the [organisation's](#) [policy](#) to provide a deeper understanding and awareness of the issues.

#### **E.2.4.3. Appointment**

≤ Personnel should only be assigned to [posts](#), [roles](#) and tasks for which they are [competent](#) or appropriately supervised.

Original [competency certificates](#) should be obtained and copies retained and authenticated as true copies.

[Contract](#) of employment [document template\(s\)](#) should be established and current with [organisation policy](#) and legislation. [Contracts](#) should cover or reference:

- Hours to be worked,
- [Job description](#),
- Drugs and Alcohol [procedure](#),
- Accident reporting [procedure](#),
- Refusal to work on grounds of [health](#) and [safety](#),
- Commencement date,
- Pensions,
- Holidays,
- Disciplinary [process](#),
- Grievance [process](#),
- Sick pay.

Appointee should be added to personnel and [organisation database\(s\)](#) – refer to E.4.2.1 [Databases](#).

#### E.2.4.4. Competence

≤ The [organisation's](#) [competency schedule](#) should be [determined](#) from an [analysis](#) of its [process definitions](#) – refer to section **Error! Reference source not found.** [Process design](#). The [schedule](#) should take account of [prospect and risk assessment](#) covered in section E.1.6 [Prospect and risk assessment](#). Where necessary it should describe [responsibility](#) levels e.g. for a [project](#) manager who may be assigned to a certain size and complexity of [contract](#). See also E.2.2 [Responsibilities and authorities](#).

It may be convenient to [define](#) specific [competencies](#) by referencing the [procedure](#) or instruction that [defines](#) the task(s). The degree of [competence](#) may be [defined](#) using a scale such as that [defined](#) by Table 2: Competence levels:

**Table 2: Competence levels**

| Competence Level | Interpretation  | Competence Definition  |
|------------------|---|--|
| 1                | Aware.  | Aware of the key issues and how they are controlled and <a href="#">managed</a> . This <a href="#">competence</a> level may be sufficient for a senior line manager or a non-line manager not directly involved in directly <a href="#">managing</a> a <a href="#">process</a> . |
| 2                | <a href="#">Competent</a> to perform under supervision. | <a href="#">Competent</a> to perform <a href="#">defined duties</a> or <a href="#">processes</a> under the direct supervision of an <a href="#">expert</a> .   |
| 3                | <a href="#">Competent</a> to perform unsupervised.      | <a href="#">Competent</a> to perform <a href="#">defined duties</a> or <a href="#">processes</a> unsupervised.   |
| 4                | <a href="#">Expert</a>                                  | <a href="#">Competent</a> to perform <a href="#">defined duties</a> or <a href="#">processes</a> unsupervised, provide <a href="#">expert</a> advice, train, supervise and mentor personnel who are developing <a href="#">competence</a> .                                      |

[Competent](#) Personnel may be directly employed or [contracted](#) via an approved [supplier](#) – refer to section 0 [Suppliers](#).

[Effective planning](#) must be applied to ensure that personnel are only assigned to [posts](#), [roles](#) and tasks for which they are [competent](#) or appropriately supervised.

[Competence requirements](#) may change following changes to [structures](#) and [processes](#) – refer to section 0 [Change](#).

#### **E.2.4.4.1. Competence, education and training needs**

≤ The [training](#) needs program should include the costs of delivery so that it can form part of the annual financial budget that will be approved as part of the [management](#) review [process](#) – see section 0 [Review and Action](#).

[Training](#) needs should cover explicit and [tacit knowledge](#).

#### **E.2.4.4.2. Competence development and assessment**

≤ The [organisation](#) should ensure that [competence](#) development is focused where it will contribute most to satisfying the [needs](#) and [expectations](#) of [stakeholders](#) and will provide the best [value](#) for money.

[Effective](#) and [efficient communication](#) is critically important to [competence](#) development and its assessment – refer to E.2.5.2 [Communication, consultation, participation and reporting](#).

Personnel should be made [accountable](#) through [effective monitoring, review](#) and appraisal to ensure that what is [required](#) is actually delivered, and where appropriate [action](#) is initiated. Feedback should be constructive but where [significant human violations](#) have occurred disciplinary [action](#) should be considered.

#### **E.2.4.4.3. Education and training program evaluation**

≤ The [organisation](#) should [create](#) a standard [form](#) for recording feedback on the [performance](#) of [education](#) and [training programs](#).

#### **E.2.4.4.4. Fitness**

≤ [Fitness](#) includes physical [fitness](#), mental [fitness](#), and medical [fitness](#) and are important [aspects](#) of [competence](#).

Special classes of people typically include the disabled, people with [health](#) problems, young people, pregnant women, nursing mothers etc. Special [risk assessments](#) are [required](#) as per section C.1.6.5 [Prospect and risk improvement](#).

Structures and processes should be selected or designed and operated taking account of the [fitness](#) of personnel and the guarding against potential workplace [stressors](#) as per sections 0 [Normal Structures and Processes](#) and 0 [Contingency Structures and Processes](#).

Managers should be open to personnel reporting [stress](#) or [welfare](#) or other problems or behaving unusually and interview them and take appropriate [action](#). If appropriate, managers should [review workplace risk assessments](#) covered in section E.1.6 [Prospect and risk assessment](#) and [structure and process definitions](#) covered in section **Error! Reference source not found.** [Process design](#).

If drugs and alcohol forms part of the [policy](#), personnel should be subjected to ‘[for-cause](#) alcohol and drug [testing](#)’ when their [behaviour](#) gives cause for concern or in circumstances [required](#) by [stakeholders](#). The suspected personnel should be supervised or removed from the [workplace](#) until the [test](#) proves negative. If positive, disciplinary [action](#) should be initiated as per section E.2.4.8 [Discipline](#).

#### E.2.4.5. Welfare

≤ [Welfare arrangements](#) should include toilets, washing [facilities](#), changing rooms with clothes storage and eating [facilities](#) appropriate to the [organisation](#) and the nature of the [workplaces](#). [Welfare arrangements](#) need to take account of personnel working remotely from the [organisation's](#) premises – refer to section E.2.1.1 [Remote working](#) . [Project contracts](#) should address [welfare requirements](#) – refer to section E.3.2 [Stakeholder agreements](#).

#### E.2.4.6. Work absence and rehabilitation

≤ The implementation of an [effective](#) set of rehabilitation [arrangements](#) following work absence should enable the [organisation](#) to negotiate lower insurance premiums.

#### E.2.4.7. Post or role change

≤ The same [processes](#) need to be applied during the appointment of personnel from outside or inside of the [organisation](#), [as applicable](#). Personnel undergoing a [post](#) or [role](#) change should be subjected to the relevant [aspects](#) of section E.2.4 [Employment life cycle](#).

Changing the [post](#) or [role definition](#) may have a [significant impact](#) on [organisation performance](#) and needs to be carefully [planned](#) and executed – refer to section E.9.4 [Structure and process change](#).

#### E.2.4.8. Discipline

≤ It is important that [arrangements](#) are [defined](#) and implemented which are and are seen to be just. It is important that all staff are aware that [violations](#) of the [organisation policy](#) and [management system](#) are viewed as serious [events](#) leading to disciplinary [action](#) and where necessary discharge from the [organisation](#). It is important that the disciplinary [process](#) is fully [defined](#), made [transparent](#) to staff and is carefully followed during an [event](#). If any doubts arise during the [process expert](#) advice should be sought as per section E.2.3 [Provision of expert advice and assistance](#).

#### E.2.4.9. Leaving

≤ If a person is dismissed it is most important that the disciplinary [process](#) and legal [requirements](#) are followed. If any doubts arise during the [process expert](#) advice should be sought as per section E.2.3 [Provision of expert advice and assistance](#).

Death in service during work time or related to work should be [investigated](#) to meet the legitimate needs of [stakeholders](#) as per section 0 [Reactive investigation – Events](#).

There is a risk that a leaver will cause the [organisation](#) to lose [tacit knowledge](#) and it should therefore attempt to [safeguard](#) the continuity of the [organisation's structures](#) and [processes](#). It should also capture valuable feedback during the leaving [process](#) and initiate improvement via [review](#) and change of relevant [structures](#) and [processes](#) – refer to sections 0 [Review and Action](#) and 0 [Change](#). Where practicable [structured](#) exit interviews should be conducted by line managers.

### E.2.5. Personnel Interactions

≤ Interactions between [organisations](#) should be [effective](#) and [efficient](#).

[Effective](#) and [efficient](#) interaction may be enhanced through the adoption of conventions – refer to section E.4.4 [Conventions](#).

### E.2.5.1. Interfaces

≤ Where necessary, [interface agreements](#) may be used to formalise how two or more [organisations](#) should interface [effectively](#) and [efficiently](#). This is potentially applicable to the main [organisation](#) and [project organisations](#). It could be applicable to an [organisation](#) interacting with a parent [organisation](#) or licensing body or between [diverse](#) divisions within an [organisation](#). It also includes authorities and special interest groups relevant to the [organisation](#).

### E.2.5.2. Communication, consultation, participation and reporting

≤ Effective two-way formal and informal [communication](#) and interaction is critical to [organisation performance](#) and needs to be directed and promoted internally and between external bodies and [organisations](#).

[Communication](#), consultation, participation and reporting should be suitable and sufficient to support the [effective](#) and [efficient](#) functioning of the [organisation](#), satisfy [stakeholder needs](#) and [expectations](#) and be 'Clear, Concise, Concrete, Correct, Coherent, Complete and Courteous'.

The [organisation](#) should [identify](#) and [classify](#) its principal types of [communication](#), consultation, participation and reporting [structures](#) and [processes](#), who they are applied to, their principal [purpose](#) and their criticality to the [organisation's performance](#). The [organisation](#) should [plan](#) who, how and within what timescales it will respond to relevant [communication](#). In determining how it will [communicate](#), consult, facilitate participation and report, the [organisation](#) should consider

- Methods, including verbal or written,
- Tools including internet, letter, video or report,
- Retain [records](#) as evidence.

[Communication](#) should be simple. Standardised [communication](#) may include the use of standardised protocols, language and terminology to reduce the [risk](#) of [miscommunication](#) – refer to E.4.4 [Conventions](#). This typically includes confirmation of receipt and understanding of information. Understanding and retention of information and [knowledge](#) is enhanced by using more than one medium e.g. sound and [vision](#), and also participation. This is important to [education](#) and [training](#) – refer to E.2.4.4.2 [Competence development and assessment](#).

Non-disclosure agreements are commonly used to [define communication](#) restrictions.

[Communication](#) may be enhanced by the application of specific [management tools](#) and techniques - refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- [3d Graph](#)
- [Affinity Diagram](#)
- [Bar Chart](#)
- [Data Handling and Display](#)
- [Histogram](#)
- [Line Graph](#)
- [Matrix Data Analysis Chart](#)
- [Matrix Diagram](#)
- [Performance Indicators](#)
- [Profile Graphs](#)

- [Radar Chart](#)
- [RAG Status Report](#)
- [Tables](#)
- [Tree Diagram](#)

#### **A.1.1.1.1. Internal communication**

≤ [Organizational structure](#) should be considered to ensure the most appropriate level and functions have a suitable and sufficient channel of [communication](#) which takes account of the [assessed prospect and risk](#) and potential for [human error](#) – refer to section E.1.6 [Prospect and risk assessment](#). [Communication](#) with each person doing work may not be needed. A single approach to the whole [organisation](#) may be adequate to meet its [communication objectives](#).

The [organisation](#) should ensure that it adequately responds to relevant internal [communication](#) including questions and enquiries related to any [aspect](#) of the [organisation's performance](#) which may include [health](#) and [safety](#) of personnel and the [environment](#), [goods](#) and [services quality](#) or other [significant](#) performance issues.

Aides to [communication](#) may include [colour coding](#), standardised signage using graphics and formal structured controls for sending, receiving and checking – refer to section E.4.4 [Conventions](#).

#### **A.1.1.1.2. External communication, consultation, participation and reporting**

≤ External [communication](#) should meet the following [criteria](#):

- [Transparent](#) so the [organisation](#) is open to the way it derived the information to meet the [needs](#) and [expectations](#) of relevant [stakeholders needs](#) and [expectations](#), enabling them to fully participate in the [communication](#),
- Truthful and not misleading,
- Factual, accurate and reliable, ensured by [robust systems](#) and [procedures](#),
- Complete in its own context and not exclude relevant information,
- Clearly understandable devoid of ambiguity.

The [organisation](#) should ensure that it adequately responds to relevant external [communication](#) including:

- Questions and enquiries related to [environmental performance](#).
- External [communication](#) should demonstrate the [organisation's knowledge](#) and understanding of its compliance status.
- [Stakeholder impacts](#) may include [health](#), [safety](#), [environmental](#), [quality](#) or other [significant](#) issues.

On discovery, on-going [risk events](#) should be reported immediately by phoning the relevant body's undesired [events](#) hotline as they may be able to [mitigate](#) the [risk](#) of the [event](#) via their [contingency arrangements](#). An example of this would be the [significant](#) release of an undesirable substance into a watercourse or a major [good](#) defect requiring it to be recalled.

The [organisation's](#) staff [responsible](#) for external reporting should liaise with relevant internal staff including its [expert](#) advisers, as necessary.

[Marketing](#) is covered in section E.3.2 [Marketing](#).

### **A.1.1.1.3. Whistleblowing**

< [Whistleblowing](#) could be classed as a [contingency arrangement](#) as it serves no [purpose](#) when an [organisation](#) has an open questioning [organisation culture](#) and the normal [communication processes](#) providing personnel feedback are [effective](#). It is when an [organisation](#) or a part of it becomes dysfunctional in some way and cannot be trusted that [whistleblowing](#) can help [safeguard](#) the legitimate [needs](#) and [expectations](#) of the [organisation's stakeholders](#). [Whistleblowing arrangements](#) help balance [stakeholder](#) power within an [organisation](#) and prevent or reduce its abuse. It acts as a defence against self-serving [behaviours](#) of personnel seeking [stakeholder](#) win-lose outcomes rather than win-win outcomes.

[Whistleblowing arrangements](#) allow personnel to disclose [observed](#) or suspected wrongdoing in the [workplace](#). A [worker](#) may report things that are not right, are illegal or if anyone at work is neglecting their [duties](#), including:

- Someone's [health](#) or [safety](#) is in [danger](#),
- Damage to the [environment](#),
- A criminal offence,
- The [organisation](#) isn't obeying the law (e.g. not having the right insurance),
- Serious or persistent [violations](#) of the [management system](#),
- Covering up wrongdoing.

A [worker](#) would normally [whistleblow](#) if they think their employer:

- Will cover it up,
- Would treat them unfairly if they complained,
- Has not sorted it out and they have already told them.

Personnel may whistle blow internally ideally to an independent designated person or to an external body supplying a professional [service](#).

The legality of [whistleblowing](#) depends on the country where personnel are employed but an [organisation](#) should in any case provide [whistleblowing arrangements](#) compliant with this standard.

### **E.2.5.3. Management of conflict**

< It is in all [stakeholders'](#) interests that any [organisation](#) activity does not continue if there are reasonable concerns that there is a perceived [threat](#) to [stakeholder needs](#) and [expectations](#). This may include personnel [safety](#), [environmental harm](#) or [good](#) or [service quality](#) leading to [waste](#).

It is important that there is a [system](#) in place for [identifying](#) and resolving conflict that everyone understands is necessary and trusts. Personnel should not feel inhibited from taking reasonable [actions](#) that are in all [stakeholders'](#) interests.

Managers should first discuss concerns raised by personnel and attempt to resolve them seeking advice from senior managers and [expert](#) advisers, as necessary. If unable to resolve the matter, it should be referred up the line [management](#) chain for resolution. Work should only be recommenced when sufficient confidence has been established that the work method or site [conditions](#) are acceptable.



If personnel feel that the conflict resolution [process](#) has not been properly conducted in the interests of [stakeholders](#), there may be legitimate grounds for [whistleblowing](#) as per section **Error! Reference source not found.** [Whistleblowing](#).

See also section E.8.2.3 [Intentionally halted processes](#).

If the [event](#) constitutes a [near miss](#) it should be [recorded](#) as per section 0 [Reactive investigation](#) and section E.9.2 [Corrective and preventive action](#) followed, if applicable.

### E.3. Commerce

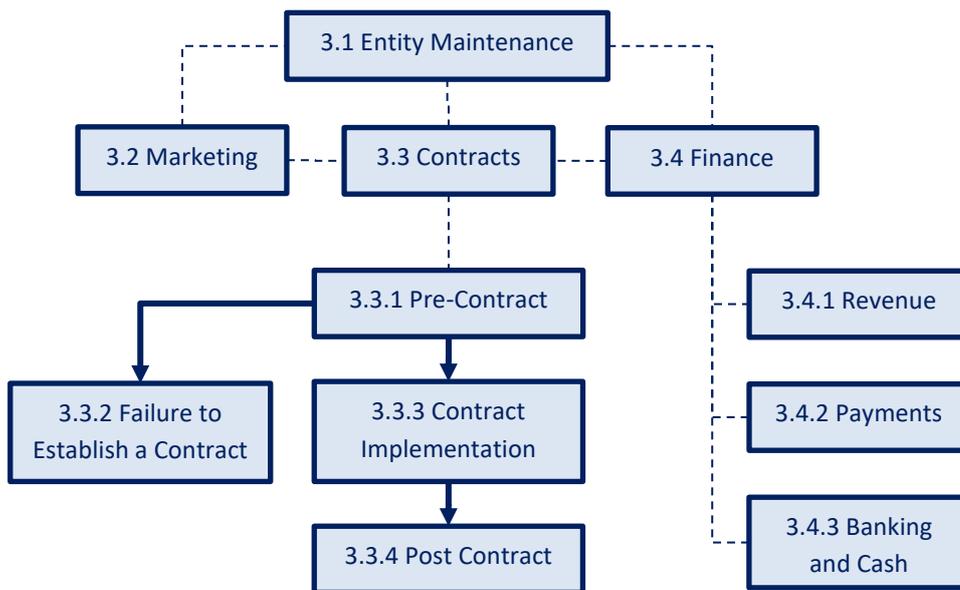


≤ [Commerce](#) is about trading with relevant [stakeholders](#) through the exchange of [goods](#), [services](#) and financial payment.

This section covers the control of the [maintenance](#) of the [organisation's](#) existence as a trading [entity](#) (legal [entity](#)), the relationships with its internal and external [stakeholders](#) via [contracts](#) and [interface agreements](#) and finance. These three sub-elements control trading [processes](#) and the [commercial performance](#) of the [organisation](#). Considerable [risk](#) is [managed](#) within this element of the [MSS](#) and should be addressed during [planning](#) – refer to section C.1 [Assessment and Development of Controls](#).

The establishment and [operation](#) of [commercial structures](#) and [processes](#) should always [prospect and risk assess](#) the potential for fraud focusing on the [conditions](#) or potential [events](#) that indicate an incentive to commit fraud or the [prospect](#) of doing so – refer to section E.1.6 [Prospect and risk assessment](#).

[Commerce](#) is important to all [organisations](#) as they are all involved in trading [processes](#) even if they are not a [commercial](#) business whose [purpose](#) is to make a profit.



**Figure 13: Commerce Subsections**

#### E.3.1. Entity maintenance

≤ An [organisation](#) needs to establish, nurture and [maintain](#) itself as an appropriate entity to:

- Be recognized, trusted and able to interact with [stakeholders](#),
- Trade with [suppliers](#) and [customers](#),
- Satisfy legal and [contractual](#) obligations.

Typical [requirements](#) for an [entity](#) include:

- Registration as a company or other type of legal [entity](#),

- Registration for paying taxes,
- Registration for activities conducted on behalf of [employees](#),
- Membership of trade bodies,
- Registration with [management system certification](#) bodies,
- [Supplier](#) relationships,
- [Customer](#) relationships.

These relationships enable an [organisation](#) to trade with other [organisations](#) because it is recognised as a legitimate legal [entity](#).

### E.3.2. Marketing

≤ The [purpose](#) of [marketing](#) is to [identify](#) and anticipate [customers](#) and other [stakeholder needs](#) and [expectations](#) to enable the [planning](#) of the optimal delivery of the [organisation's goods](#) and [services](#). If the [organisation](#) is a business, the principal [objective](#) is to be profitable, but in other types of [organisations](#), the [objective](#) may be just to [maintain](#) financial viability.

[Marketing plans](#) may be integrated with the [organisation's strategic plan](#) or with a business [plan](#) – refer to section E.1.1 [Foundation planning](#).

A [marketing plan](#) for a small [organisation](#) may typically include:

- Description of the [good](#) or [service](#), including special features,
- [Marketing](#) budget, including the advertising and promotional [plan](#),
- Description of the business location, including advantages and disadvantages for [marketing](#),
- Pricing [strategy](#),
- [Market](#) segmentation.

A [marketing plan](#) for a medium or large size [organisation](#) may typically include:

- Executive summary,
- Situational [analysis](#),
- [Opportunities](#) and issue analysis – strengths, weaknesses, [opportunities](#) and [threats analysis](#),
- [Objectives](#),
- [Marketing strategy](#),
- [Action](#) program for the [operational marketing plan](#) for the [review](#) period,
- Financial forecast,
- Controls.

[Marketing materials data](#) should comply with section E.4.2.7 [Marketing materials and website](#).

Where applicable, the [organisation](#) should [identify opportunities](#) for prequalification to enable it to bid for [contracts](#).

[Marketing processes](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Boston grid](#)
- ❖ [Brainstorming](#)
- ❖ [Data handling and display](#)
- ❖ [Decision tree](#)

- ❖ [Focus groups](#)
- ❖ [Interviews](#)
- ❖ [Line graph](#)
- ❖ [Profile graphs](#)
- ❖ [Prospect assessment](#)
- ❖ [Prospect and/or risk modelling and risk simulation](#)
- ❖ [Prospect and/or risk register/database](#)
- ❖ [Rag status reports](#)
- ❖ [Checklists](#)
- ❖ [Stakeholder analysis](#)
- ❖ [Stakeholder engagement matrices](#)
- ❖ [Strengths weaknesses, opportunities and threats analysis](#)
- ❖ [Surveys](#)
- ❖ [Tables](#)
- ❖ [Tree diagram](#)
- ❖ [Uncertainty analysis](#)
- ❖ [Utility theory](#)
- ❖ [Value analysis](#)
- ❖ [Visualization techniques](#)

### E.3.3. Contracts

≤ The primary [purpose](#) of [contracts](#) is to [define equitable](#) win-win agreements between [stakeholders](#). The [process](#) leading up to a [contract](#) should involve an interaction between the relevant [stakeholders](#) so that the [needs](#) and [expectations](#) of each [stakeholder](#) are properly [communicated](#) to all parties to avoid costly misunderstandings after the [contract](#) has been enacted. The primary aim should be to achieve a good agreement for all [stakeholders](#) and not rely on post [contract](#) litigation as a means of protection and redress.

Typical [contractual](#) relationships include:

- Employer and [employee](#),
- Main contractor and subcontractor,
- [Supplier](#) and [customer](#),
- Partnership or joint venture.

[Contracts](#) may be implemented externally and internally and may have high associated [risks](#) that need to be assessed and appropriate [action](#) taken. The [organisations](#) principal [operations](#) fulfilling its [purpose](#) may involve low frequency high [value contracts](#) repeated within a set of generic [arrangements](#) or high frequency low [value contracts](#) each with bespoke [management arrangements](#). Both types of [contract](#) delivery may have similar overall [risks](#) warranting an equivalent amount of [management](#) attention.

Approved [document template\(s\)](#) which have been [reviewed](#) by an appropriate [expert](#) should be used for [contracts](#) that are regularly enacted and facilitate compliance with the [organisation's contract](#) rules – refer to sections E.2.3 [Provision of expert advice and assistance](#) and E.4.1 [Management system structure](#). [Document templates](#) are convenient receptacles for embedding rules into [contracts](#).

[Commercial contracts](#) include small [value](#) high-frequency transactions as well as high-[value](#) low-frequency transactions and appropriate [arrangements](#) should be implemented for their [management](#).

If [bribery](#) is detected or reported it should be treated as an [event](#) – refer to section 0 [Reactive investigation](#). This may result in disciplinary [action](#) being taken as per section E.2.4.8. [Discipline](#).

[Contract planning](#) and implementation [processes](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Project profile model](#)
- ❖ [Prospect assessment](#)
- ❖ [Prospect and/or risk modelling and risk simulation](#)
- ❖ [Prospect and/or risk register/database](#)
- ❖ [Rag status reports](#)
- ❖ [Ranking and rating](#)
- ❖ [Stakeholder analysis](#)
- ❖ [Stakeholder engagement matrices](#)
- ❖ [Strengths weaknesses, opportunities and threats analysis](#)
- ❖ [Surveys](#)
- ❖ [Tables](#)
- ❖ [Tree diagram](#)
- ❖ [Uncertainty analysis](#)
- ❖ [Value analysis](#)
- ❖ [Visualization techniques](#)

#### E.3.3.1. Pre-Contract

≤ The pre-[contract arrangements](#) may vary considerably depending on the size and type of [organisation](#).

Major single [contracts](#) or the [arrangements](#) governing a high volume of [contracts](#) should be [peer reviewed](#).

[Organisations](#) may [cooperate](#) in the delivery of a [good](#) or [service](#) via different relationships such as [organisation](#) and [suppliers](#), principal contractor and sub-contractor or a joint venture etc.

[Suppliers](#) should be evaluated according to section E.6.1 [Classification and vetting](#).

#### E.3.3.2. Failure to establish a contract

≤ It is important that the [organisation](#) attempts to [determine](#) the reasons for failing to establish a [contract](#) with [customers](#) or [suppliers](#) to [determine](#) how to be more successful in the future. It is good to [maintain](#) a standard [form](#) for guiding and recording the [review process](#) or the [failure](#) can be treated as an [event](#) – refer to section 0 [Reactive investigation](#).

#### E.3.3.3. Contract implementation

≤ The time period, complexity and nature of the [contract](#) implementation will vary considerably depending on the size and type of the [organisation](#).

[Contract monitoring](#) as per section 0 [Reactive investigation](#) and 0 [Planned monitoring](#) are necessary to [determine](#) when [contractual](#) obligations are triggered such as stage reports and payments as per sections E.3.4.1 [Revenue](#) and E.3.4.2 [Payments](#) to ensure that [contracts](#) are not violated and financial cash flow is controlled.

#### **E.3.3.4. Post Contract**

< [Suppliers performance](#) should be assessed as per section E.6.4 [Performance evaluation](#).

#### **E.3.4. Finance**

< [Prospect and risk assessment](#) should be applied to all [significant](#) financial situations including the provision and receiving of loans as per section E.1.6.5 [Prospect and risk improvement](#). [Contingency arrangements](#) should also be considered where appropriate such as insurance – refer to section 0 [Contingencies](#).

Financial budgets should be prepared based on the agreed [plans](#) for the [organisation](#) and also for [projects](#) as part of [management review](#) and [action processes](#) – refer to section 0 [Review and Action](#).

The [organisation](#)'s financial reports should typically include:

- Profit and loss,
- Income and expenses,
- Balance sheet and net worth,
- Accounts overdue for payment,
- Budget spend,
- Cash flow,
- Finance [available](#) for shareholder dividend.

See also section E.4.3.1 [Accounts](#).

Financial [planning](#) and control [processes](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Cash flow analysis](#)
- ❖ [Prospect and/or risk register/database](#)
- ❖ [Rag status reports](#)
- ❖ [Tables](#)
- ❖ [Uncertainty analysis](#)
- ❖ [Value analysis](#)

#### **E.3.4.1. Revenue**

< [Arrangements](#) should ensure that revenue from [customers](#) or other bodies is requested and received as soon as possible to reduce cash flow and the [risk](#) of payment defaulting. Overdue payment should be carefully [monitored](#) and reminders sent out followed by if necessary timely legal [actions](#) to recover the debt.

#### **E.3.4.2. Payments**

< [Contractual data](#) collection may include:



- Contract [program](#) implemented,
- Time sheets,
- Calculation of [employee](#) gross and net monthly salary,

Each time an item is purchased on behalf of the organisation a purchase order should be [created](#) to enable reconciliation of incoming invoices. Purchase Orders should typically include:

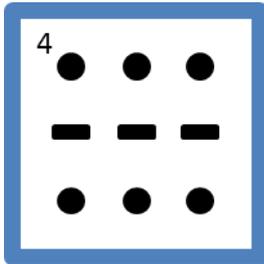
- Name of [supplier](#)
- Date of order
- Purchase order number
- Quantity
- Description of the [goods](#) or [services](#) being purchased
- Name of person placing the order.

#### **E.3.4.3. Banking and cash**

< [Organisations](#) should [identify](#) the [need](#):

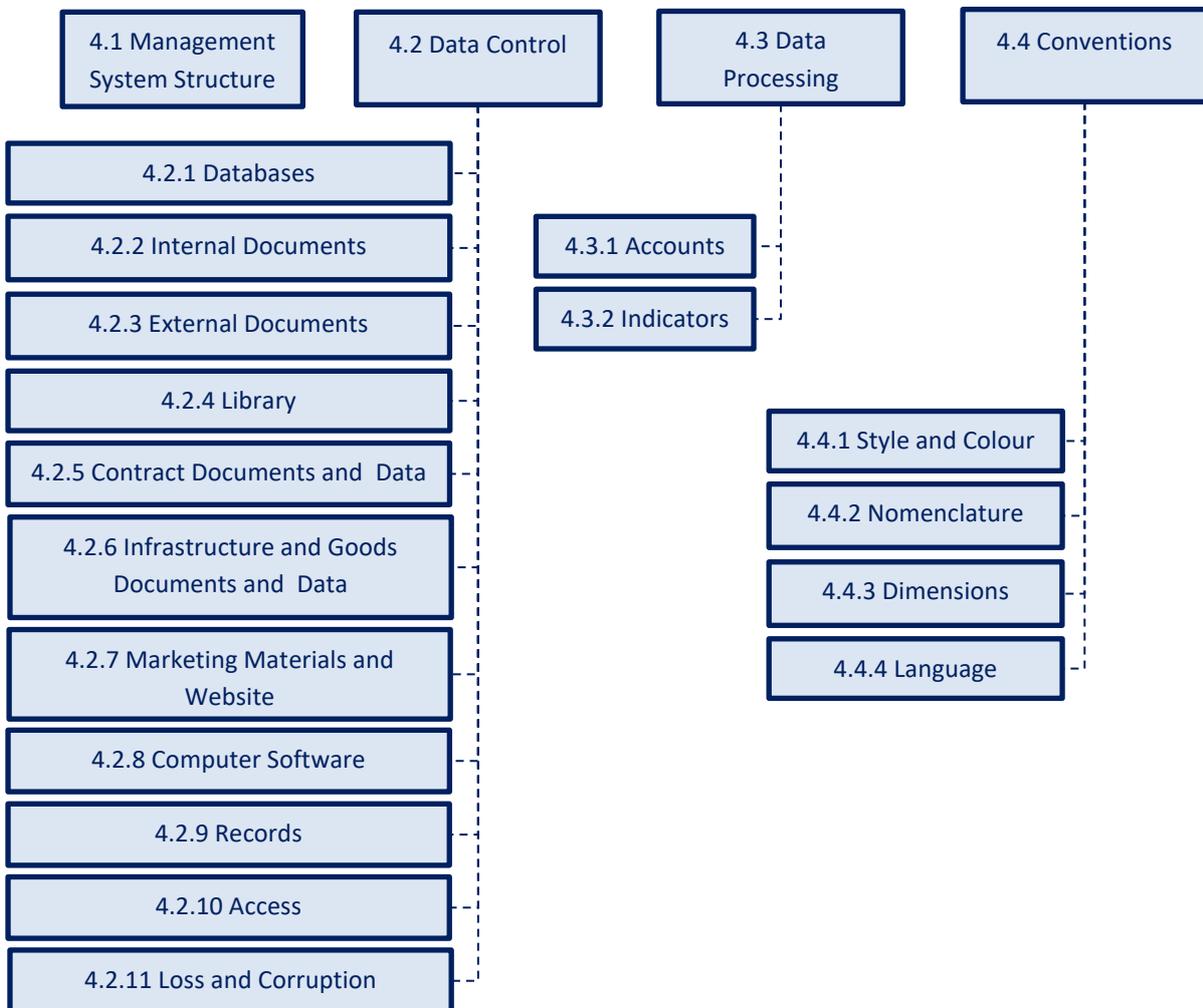
- For banking [services](#) to be supplied by approved [suppliers](#) – refer to section 0 [Suppliers](#),
- To hold, handle and distribute cash, which should be minimised, where [practicable](#) – refer to sections 0 [Normal Structures and Processes](#) and 0 [Contingency Structures and Processes](#).

## E.4. Data



< [Data](#) is a valuable and critical [organisation asset](#) that interacts with people, [commerce](#), matter and energy and [suppliers](#) within normal [goods](#) and [services](#) delivery [processes](#) and [contingency processes](#). [Data](#) requirements cover its maintenance and processing including [confidentiality](#), [availability](#), [integrity](#) and [availability](#).

[Arrangements](#) should cover the formal controls and guidance [required](#) to [manage](#) the lifecycle and evolution of [data](#) in all of its various forms. [Document](#) control is included in [data](#) control because it is a form of [data](#). Sub elements include; [data structures](#), control, [databases](#), [security](#) and its [processing](#). It should be noted that '[data processing](#)' has 'accounting' as a sub-element, which in turn has different [aspects](#) of accounting as further sub-elements. There are many facets of accounting other than financial that need to be applied to [processes](#) and it makes sense to view accounting from a broad [management](#) perspective facilitating common methodologies e.g. [databases](#) and [IT software](#) – refer to section E.4.2.1 [Databases](#). See also section E.5.4.3.4 [Data equipment](#).



**Figure 14: Data Subsections**

### E.4.1. Management system structure

≤ The elements of a [documented management system](#) should be chosen and [structured](#) to meet the needs of the [organisation](#) and its [stakeholders](#). The [management system document structure](#) should ideally be functional, elegant and consider the [planned](#) or potential future needs to avoid costly major modifications and disruption to staff and [operations](#) during change or expansion.

The [management system](#) should be sufficiently [documented](#) to support the [effective](#) and [efficient operation](#) of the [organisation](#) to meet the [stakeholders' needs](#) and [expectations](#). It must additionally permit the [management system](#) to be [effectively](#) and [efficiently reviewed](#) so that it may be changed to improve it or to remain aligned with [stakeholder](#) changing [needs](#) and [expectations](#). The degree that a [management system](#) is [documented](#) will depend on its size, activities, [structures](#), [processes](#), [goods](#) and [services](#), complexity, personnel [competence](#) and [risks](#). Any [risks](#) associated with not [documenting](#) an [aspect](#) of the [management system](#) should be low.

The [document](#) types that may typically be used include:

- [Management manual](#)
- [Policy statement](#)
- [Standard or regulation map](#)
- [Job description](#)
- [Management procedure](#)
- [Work instruction](#)
- [Document template](#)
- [Form](#)
- [Schedule](#)
- [Training module](#)
- [Handbook](#)
- [Contingency plan](#)
- [Process definition](#)
- [Interface agreement](#)

[Schedules](#) typically include:

- [Organisation](#) cyclic [events](#) and interdependencies,
- [Organisation objectives](#),
- Relevant legislation,
- Current personnel appointments,
- Identified [competence](#) types,
- [Databases](#),
- [Record](#) types,
- Computer [software](#),
- Externally controlled [documents](#),
- Internally controlled [documents](#),
- Internally controlled [document](#) identifiers,
- Filing codes and [structures](#),
- Materials and energy types,
- Approved equipment types,
- Plant and equipment numbering [conventions](#),
- [Maintenance](#), [inspection](#) and [testing](#),
- Approved [suppliers](#),

- Principal core, supporting and [contingency processes](#),
- [Projects](#),
- [Project documents](#),
- Change [initiatives](#),
- [Planned monitoring](#),
- [Key performance indicators](#),
- [Management](#) meetings,
- [Organisation](#) and [project](#) progress and [performance](#) reports.

[Documents](#) should address the what, how, where, who, when and why with respect to the instruction and guidance of the [organisation's processes](#) appropriate to the type of [document](#).

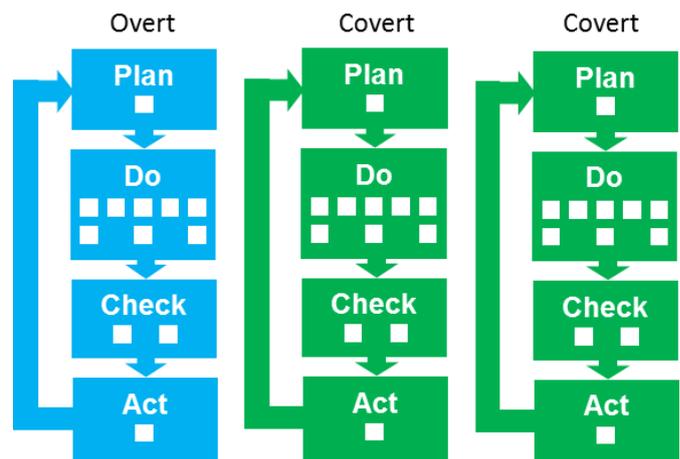
[Checklists](#) may be [structured](#) into appropriate documents as an aid to memory, help ensure compliance and to generate auditable [records](#).

[Responsibility](#) and [authority](#) should relate to the [post](#) or [role](#) and not a named person as per section C.2.2 [Responsibilities and authorities](#). A [schedule](#) should be [maintained](#) of current personnel appointments to [posts](#) and [roles](#) including their deputies, [as applicable](#).

An instructive rather than a descriptive style produces more concise text and clearer [communication](#). However, it is customary to write manuals and introductory or explanatory sections of [documents](#) in a descriptive style. An example of a descriptive style would be 'the personnel manager is [responsible](#) for maintaining accurate and current employment [records](#)' whereas an instructive style would be '[maintain](#) accurate and current employment [records](#)' with a label that the instruction refers to the personnel manager.

The [need](#) for [documents](#) to be [available](#) at the point of the activity and if they should be followed step-by-step or just referenced as necessary will depend on the [likelihood](#) and consequence of errors being made.

A single [overt integrated management system](#) should be [designed](#) and implemented containing everything that can be allowed to be freely [accessed](#) by all personnel. Elements that need to be [covert](#) should be incorporated into one or more [covert management systems](#) as shown conceptually in Figure 15: Overt and Covert Management Systems.



**Figure 15: Overt and Covert Management Systems**

[Work instructions](#) should include elements corresponding to [Plan-Do-Check-Act](#) such as prerequisites and preparation prior to performing the activity and [required planned monitoring](#) during and after the activity with [required action](#) if abnormalities occur.

The [documented management system](#) is a valuable receptacle of [explicit knowledge](#) – see also section E.2.4.4.1 [Competence, education and training needs](#).

## E.4.2. Data control

≤ The control of [data](#), including [documentation](#), is an essential element of a [management system](#) and the [management system](#) should [define arrangements](#) to control internally generated and externally received [data](#) that [significantly impact](#) the [organisation's processes](#) and [stakeholder requirements](#) to:

- Ensure that up to date information is [available](#) where it is [required](#), superseded [documentation](#) is removed and orderliness is promoted,
- Ensure that it is adequately protected from loss or corruption or improper use,
- Provide an [opportunity](#) for regular [reviews](#) of [documentation](#) and [data requirements](#),
- Ensure regulations, standards, codes of practice and [customer](#) specifications etc. are controlled in a [systematic](#) way,
- Ensure [required data](#) is preserved to meet regulatory, [customer](#) and other business needs,
- Information is restricted to those who are legitimately [required](#) to [access](#) it.

[Data](#) may be controlled in paper or electronic form but multiple [accesses](#) to controlled [data](#) are easier to control when in an electronic form. Equipment requirements for holding [data](#) are covered in sections E.5.4.3.4 [Data equipment](#) and E.5.4.3.5 [Mobile plant and equipment](#).

Where appropriate, satellite [data](#) control centres should be established meeting the same standards as the primary [data](#) control centre.

See also E.9.6 [Management system change](#).

### E.4.2.1. Databases

≤ [Prospect and risk assessment](#) should be conducted to [determine](#) the degree that [databases](#) should be integrated as per section E.1.6 [Prospect and risk assessment](#). Being able to interrogate [data](#) as a single [entity](#) is more [efficient](#) however; [security](#) issues may outweigh any perceived benefits of integration.

[Databases](#) may be used to [manage](#) compliance with this [MSS](#) and where [practicable](#) it should ideally be fully integrated and meet the needs of all of the [organisation's](#) staff operating throughout the [organisation](#) at all levels. Additionally it may also be extended to meet the needs of specific [stakeholders](#) working closely with the [organisation](#).

[Databases](#) perform an important role in establishing inventories – refer to section E.1.1 [Foundation planning](#).

### E.4.2.2. Internal documents

≤ The [objective](#) of internal [document](#) control is to ensure that current approved [documents](#) are readily [available](#) to all those who require them where it is needed.

[Work instructions](#) may specify [good](#) or [service](#) characteristics to satisfy [requirements](#) and are often contained in drawings, specifications, [schedules](#), orders, patient prescription, etc. The level of detail may need to be increased for tasks performed by personnel of a lower [competence](#), [as appropriate](#). – refer to section E.2.4.4 [Competence](#).

#### E.4.2.3. External documents

≤ The [objective](#) of external [document](#) control is to ensure that current approved [documents](#) are readily [available](#) to all those who require them where it is needed. It covers the receipt of [documents](#) from a [document](#) controller external to the [organisation](#) and then controlling them as if they were internal [documents](#).

#### E.4.2.4. Library

≤ Libraries may be physical and/or electronic and contain internal and external documents – refer to sections E.4.2.2 [Internal documents](#) and E.4.2.3 [External documents](#).

#### E.4.2.5. Contract documents and data

≤ [Contract documents](#) should be held in an orderly [system](#) to aid retrieval and the understanding of the progress of [commercial](#) agreements and their implementation.

#### E.4.2.6. Infrastructure and goods documentation and data

≤ [Infrastructure](#) and [goods data](#) typically includes [data](#), [health](#) and [safety](#) files, [operation manuals](#) and [maintenance manuals](#) etc. Where the [organisation](#) is the [infrastructure](#) owner or is [responsible](#) for its [systems](#) these [documents](#) need to be kept up to date with modifications or newly acquired or created [goods](#) so that personnel are always [accessing](#) current and correct [data](#).

#### E.4.2.7. Marketing materials and website

≤ [Marketing](#) materials include anything that is [created](#) to [communicate](#) with potential [customers](#) or [stakeholders](#).

#### E.4.2.8. Computer software

≤ The [organisation](#) should make appropriate use of proprietary or bespoke computer [software](#) to enhance the [management](#) of its [structures](#) and [processes](#) based on [prospect and risk assessment](#) – refer to section E.1.6 [Prospect and risk assessment](#) . Types of functionality (including associated [databases](#)) that may typically be supported by separate or integrated computer [software](#) packages include:

1. Assessment and development of [management control](#) including:
  - [Management](#) of legislative [requirements](#),
  - [Prospect and risk assessment](#),
  - [Management tools](#) and techniques.
2. Personnel [data processing](#), reporting and [records](#) including:
  - [Organisation data](#),
  - Employment [life cycle data](#),
  - [Competence data](#).
3. [Commercial data processing](#), reporting and [records](#) including:
  - Legal [entity maintenance](#),
  - [Marketing](#),
  - [Contracts](#),
  - Finance.
4. [Data](#) acquisition, control and [processing](#).
5. Matter and energy [tracking](#) and [records](#).
6. [Suppliers management](#) and [records](#).
7. [Normal structures](#) and [normal processes management](#) and [records](#).

8. [Contingency structures](#) and [processes management](#) and [records](#).
9. Change [life cycle management](#) and [records](#).
10. [Reactive investigation management](#), reporting and [records](#).
11. [Planned monitoring management](#), reporting and [records](#).
12. [Management](#) of [review processes](#) and [actions management](#).

Computer [system software](#) should:

- Be fit for [purpose](#) and meet the needs of the [organisation](#),
- Provide suitable and sufficiently simple user interfaces,
- Allow for disabilities such as colour blindness etc.,
- Allow [data](#) to be readily exchanged with other [systems](#), as [required](#),
- Provide customisable reports,
- Address [security](#) needs such as [access](#), unauthorised use and change control.

#### E.4.2.9. Records

< [Records](#) should typically include anything [required](#) to [effectively](#) and [efficiently](#):

- Demonstrate compliance with legislation, adopted standards ([MSS](#)), and [contracts](#),
- Support the [operation](#) of the [organisation](#) or a [project](#) and facilitate trading,
- Prosecute or defend a civil or criminal prosecution,
- [Reactively investigate events](#),
- Conduct [planned monitoring](#),
- [Review performance](#) and take [action](#) to improve and remain aligned with [stakeholders needs](#) and [expectations](#),
- Demonstrate the [value](#) of the [organisation](#).

[Organisations](#) may decide to retain all [records](#) indefinitely in electronic form for ease of [management](#). [Stakeholder requirements](#) may require [records](#) to be destroyed after a specific period.

[Record](#) retention and corruption should address loss through such [threats](#) as [human error](#) and [violation](#), theft, fire, flood, adverse weather, vermin, media ageing and degradation. High [value records](#) should be protected by [defense in depth](#) controls.

#### E.4.2.10. Access

< Non-disclosure [requirements](#) should not negatively [impact](#) the legitimate [needs](#) and [expectations](#) of [stakeholders](#) to [access data](#) relating to them to confirm that it is factual.

Physical [security](#) of [records](#) is covered in section E.5.4.5 [Access, egress and protective barriers](#).

#### E.4.2.11. Loss and corruption

< The [robust arrangements](#) for preventing the accidental loss or theft of [data](#) should employ regular backups of [data](#) stored remotely from the normal [data](#) location and [secured](#) against common [mode failure](#) – refer to section E.1.6 [Prospect and risk assessment](#). Physical barriers of protection should be [managed](#) as per section E.5.4.5 [Access, egress and protective barriers](#).

### E.4.3. Data Processing

< The [data](#) task [schedule](#) complements the [maintenance](#), [inspection](#) and [test schedule](#) covered in section E.5.5 [Maintenance, inspection and testing](#) and may be integrated.

[Data processing](#) may be aided by the application of specific [management tools](#) and techniques - refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [3d Graphs](#)
- ❖ [Affinity Diagram](#)
- ❖ [Bar Chart](#)
- ❖ [Cash Flow Analysis](#)
- ❖ [Cause and Effect Analysis](#)
- ❖ [Concentration Diagrams](#)
- ❖ [Data Handling and Display](#)
- ❖ [Gap Analysis](#)
- ❖ [Histograms](#)
- ❖ [Line Graph](#)
- ❖ [Matrix Data Analysis Chart](#)
- ❖ [Matrix Diagram](#)
- ❖ [Pareto Analysis](#)
- ❖ [Pareto Charts](#)
- ❖ [Performance Indicator](#)
- ❖ [Profile Graphs](#)
- ❖ [Radar Chart](#)
- ❖ [RAG Status Report](#)
- ❖ [Sensitivity Analysis](#)
- ❖ [Tables](#)
- ❖ [Tree Diagram](#)
- ❖ [Uncertainty Analysis](#)

#### E.4.3.1. Accounts

≤ The [organisation](#) should [manage](#) financial and other types of [capital](#) accounting such as energy, carbon, materials, personnel working time and exposure to vibration, noise, ionising radiations etc. See also E.3.4 [Finance](#).

The accounting [database\(s\) configuration](#) should include:

- Setting up [access](#) permissions,
- Authorisation limits,
- Business stream [classifications](#) etc. to aid activity based accounting,
- Tax levels,
- Standard reports.

#### E.4.3.2. Indicators

≤ [Indicators](#) should be selected to measure the achievement of [objectives](#). The [organisation](#) should consider [indicators](#) related to the elements of its [management system](#). In addition the [organisation](#) may consider [indicators](#) that provide information about the [condition](#) of its immediate and wider [environments](#) that may be [impacted](#) by the [organisation](#) or the [organisation](#) may [impact](#).

[Indicators](#) should include suitable and sufficient [lagging indicators](#), [coincident indicators](#) and [leading indicators](#) to aid the [effective](#) and [efficient management](#) of the [organisation](#) and [projects](#).

The use of [prospect and risk indicators](#) may also be considered to [indicate](#) the [likelihood](#) of future beneficial or adverse impacts.

Indicators are often referred to as a [management tool](#) and are listed in [Appendix 4: Management Tools and Techniques](#) and include:

- [Indicator](#)
- [Key performance indicator](#)
- [Prospect Indicator](#)
- [Risk Indicator](#)

Ideally [performance indicators](#) should be arranged into a hierarchical [data structure](#) with multiple layers providing [data](#) applicable to different parts or [aspects](#) of the [organisation](#) relevant to various levels of [management](#). An [indicator](#) at any level is [determined](#) from the [indicators](#) at a lower level unless at the [atomic](#) level. [Top management](#) should be able to [observe](#) overall [performance](#) through the [indicators](#) at the top of the hierarchy referred to as [key performance indicators](#). They can then drill down into the [data structure](#) to find more detail if they wish. A list of typical [key performance indicators](#) is provided in [Appendix 7: Typical Key Performance Indicators](#).

The selection and [structure](#) of [indicators](#) is also critically important to assist in understanding and assessing the [performance](#) of an [organisation's aspects](#) related to potential low frequency high [impact events](#). This necessitates the use of indirect [indicators](#) that need to be collectively [monitored](#) to act as an early warning regarding weaknesses in defences guarding against major [events](#) – refer to section 0 [Planned Monitoring](#).

The large volume and complexity of [organisation performance](#) drivers should caution against placing too much confidence in an incomplete set of [indicators](#).

#### **E.4.4. Conventions**

≤ As appropriate, [organisations](#) should align their conventions with international or national standards – refer to section E.1.5 [Legislation and standards](#).

[Conventions](#) help [create](#) orderliness leading to improved human [effectiveness](#) and [efficiency](#). Reduction in [human error](#) improves [effectiveness](#). [Conventions](#) are typically applied to:

- E.4.4.1 [Style and colour](#),
- E.4.4.2 [Nomenclature](#),
- E.4.4.3 [Dimensions](#),
- E.4.4.4 [Language](#).

The [classification](#) of [structure](#) and [process](#) to [create](#) simplification may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Fishbone Diagram](#)
- ❖ [Flow Chart](#)
- ❖ [Heat Maps](#)

- ❖ [Infrastructure Tour](#)
- ❖ [Prioritization Matrix](#)
- ❖ [Process Flow Charts](#)
- ❖ [RAG Status Reports](#)
- ❖ [Stakeholder Analysis](#)
- ❖ [Stakeholder Engagement Matrices](#)
- ❖ [Tables](#)

#### E.4.4.1. Style and colour

≤ Defining style helps to project the [brand\(s\)](#) of the [organisation](#) and aid [communication](#) e.g. [colour coded communication](#) – see section E.2.5.2 [Communication consultation, participation and reporting](#) and **Error! Reference source not found.** [Structure and process design](#).

Signage being used as a [management control](#) should also follow these principles and, [as applicable](#), follow national and global conventions. See section E.1.6.5 [Prospect and risk improvement](#).

#### E.4.4.2. Nomenclature

≤ Defining clear logical nomenclature aids [communication](#) and helps to reduce the [likelihood](#) of [human errors](#) – see section E.2.5.2 [Communication, consultation, participation and reporting](#) and **Error! Reference source not found.** [Structure and process design](#).

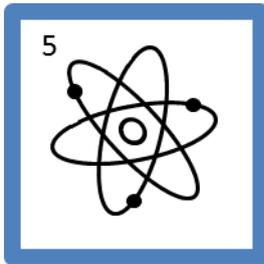
#### E.4.4.3. Dimensions

≤ Dimension [systems](#) should wherever [practicable](#) be standardised and match [competences](#) – refer to section E.2.4.4 [Competence](#) and E.7.1.7 [Measurement and testing](#).

#### E.4.4.4. Language

≤ Language should wherever [practicable](#) be standardised while meeting the needs of [stakeholders](#) and match [competences](#) – refer to section E.2.4.4 [Competence](#) and **Error! Reference source not found.** [Structure and process design](#).

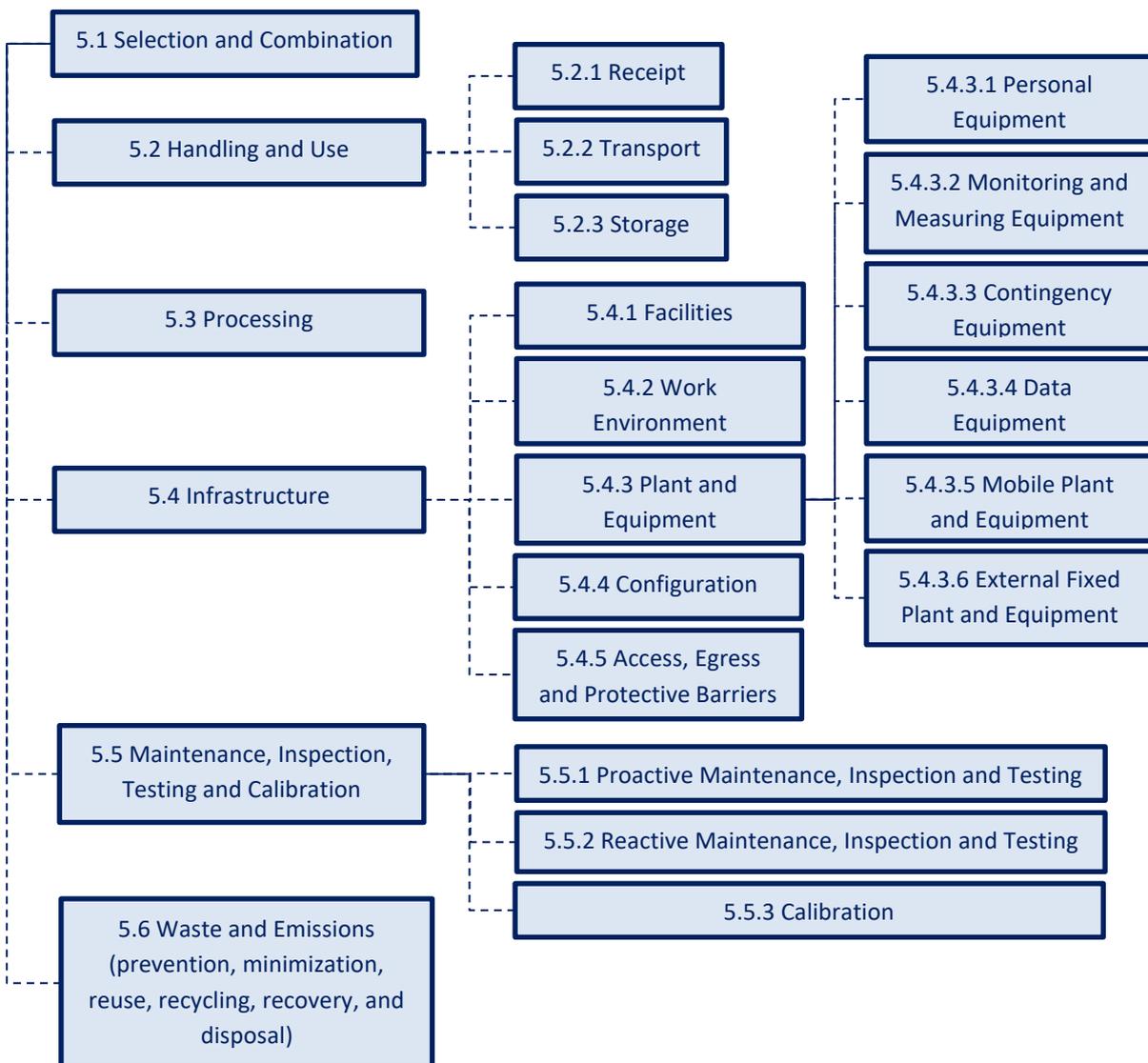
## E.5. Matter and Energy



≤ Matter and energy includes everything that is naturally [created](#) including biological or man-made, including energy, except where it is already addressed by the other elements such as ‘people’ in section 0 [Personnel](#).

Einstein’s equation  $E=MC^2$  justifies this natural element grouping. Sub-elements cover the lifecycle [management](#) of materials, [goods](#) and [infrastructure](#).

Critical [process](#) steps are often [defined](#) in (safe) [systems of work](#) and [failure](#) can account for major [organisation](#) losses, for example, the UK Piper Alpha oil platform disaster in the North Sea in 1988 killing 167 people.



**Figure 16: Matter and Energy Subsections**

### E.5.1. Selection and combination

≤ Materials and energy have the potential to satisfy but also negatively [impact stakeholder needs](#) and [expectations](#). The [organisation](#) should follow the [arrangements](#) of section E.1 [Assessment and Development of Controls](#). The interactions of matter and energy are as important as their individual characteristics. Selection and combination of materials and energy covers the complete [life cycle](#) of [structures](#) and [processes](#) including materials and energy [created](#) by [processes](#) – refer to sections E.5.3 [Processing](#) and E.7.1 [Structure and process design](#).

[Hazards](#) associated with materials and energy and their combination may [impact](#) people, the [environment](#) and other physical [stakeholder assets](#) and typically includes causing [harm](#) via:

- Ingestion, injection, inhalation,
- Fire or explosion,
- Hot or cold,
- Radiation [emission](#),
- Direct physical damage through shape, mass or volume,
- Interruption of a [process](#) e.g. asphyxiation, drowning, machine malfunction,
- Degradation of physical [quality](#) e.g. efficacy, colour, texture, reliability, life etc.

### E.5.2. Handling and use

≤ The [organisation](#) should [define arrangements](#) for the [safe](#), [effective](#) and [efficient](#) use of matter and energy including:

- E.5.2.1 [Receipt](#),
- E.5.2.2 [Transport](#),
- E.5.2.3 [Storage](#).

#### E.5.2.1. Receipt

≤ Purchase delivery reconciliation may be between a purchase order, invoice and delivery note and materials received etc., [as applicable](#).

#### E.5.2.2. Transport

≤ Transport of matter and energy should be [managed](#) to optimally satisfy the [organisation's](#), [customers](#) and other [stakeholder's needs](#) and [expectations](#) while [safeguarding](#) personnel and the [environment](#) and making the best use of [resources](#) – refer to E.1.6 [Prospect and risk assessment](#).

[As applicable](#), approved [suppliers](#) should be used – refer to section 0 [Suppliers](#).

#### E.5.2.3. Storage

≤ Energy and matter should be stored [safely](#) with respect to personnel and the [environment](#) and its [integrity assured](#) according to [planned arrangements](#) – refer to E.1.6 [Prospect and risk assessment](#).

### E.5.3. Processing

≤ The [processing](#) of energy and matter should be [managed safely](#), [effectively](#) and [efficiently](#) to optimally satisfy [customers](#) and other [stakeholder needs](#) and [expectations](#), and make the best use of [resources](#) – refer to E.1.6 [Prospect and risk assessment](#).

The types and forms of matter and energy output from [processes](#) may [significantly](#) differ from the [process](#) inputs and should be carefully selected – refer to section E.5.1 [Selection and combination](#).

[Processes](#) may be endothermic (absorbing energy) and exothermic (emitting energy). The [organisation](#) should endeavour to optimize the minimization of its overall energy usage.

#### **E.5.4. Infrastructure**

≤ The [organisation](#) should [define arrangements](#) for [safely](#), [effectively](#) and [efficiently](#) managing its own [infrastructure](#) and any other [infrastructure](#) that it is [responsible](#) for and address:

- E.5.4.1 [Facilities](#),
- E.5.4.2 [Work environment](#),
- E.5.4.3 [Plant and equipment](#).

##### **E.5.4.1. Facilities**

≤ Where the [organisation](#) is [responsible](#) for [managing facilities](#) it should ensure that they are [safe](#), fit for [purpose](#) and legally compliant based on appropriate [prospect and risk assessment](#) as per section E.1.6 [Prospect and risk assessment](#).

Where an [organisation](#) is leasing [facilities](#) it should ensure that the property owner is fulfilling its [duties](#) by conducting suitable [monitoring](#) – refer to sections 0 [Suppliers](#) and 0 [Planned Monitoring](#).

##### **E.5.4.2. Work environment**

≤ The work [environment](#) parameters typically include temperature, humidity and air [quality](#) as well as ergonomic, social, psychological and [environmental aspects](#).

[Segregation](#) of [workplace environment](#) may be necessary to ensure independence and [integrity](#) of [processes](#) such as [design](#), development, [testing](#), and [operations](#) etc. and to reduce the [likelihood](#) of unauthorized [access](#) and to aid local [environmental](#) control.

As well as a general [workplace risk](#) assessment, a personnel [stress](#) assessment should be conducted to [identify](#) and assess potential [stressors](#) as per section E.1.6.5 [Prospect and risk improvement](#). Personnel [stress](#) can be extremely debilitating and can [impact](#) all [aspects](#) of an [organisation's performance](#).

See also E.2.1.1 [Remote working](#).

##### **E.5.4.3. Plant and equipment**

≤ Plant and equipment should be [operated](#) and [maintained](#) according to its [manufacturer's](#) instructions by [competent](#) persons.

[Measuring](#) equipment may be [calibrated](#) prior to use or pre-[calibrated](#) – refer to section E.5.5.3 [Calibration](#).

[Management](#) arrangements should be [defined](#) for special types of equipment, which may include:

- D [Personal equipment](#),
- E.5.4.3.2 [Monitoring and measuring equipment](#),
- E.5.4.3.3 [Contingency equipment](#),

- E.5.4.3.4 [Data equipment](#),
- E.5.4.3.5 [Mobile plant and equipment](#).

An item of plant or equipment may be applicable to one or more of the above special types of equipment.

#### **E.5.4.3.1. Personal equipment**

≤ Personal equipment includes [personal protective equipment \(PPE\)](#) and personal respiratory equipment (PRE) which should be procured and [managed](#) to ensure they are fit for [purpose](#).

#### **E.5.4.3.2. Monitoring and measuring equipment**

≤ [Monitoring](#) and [measurement](#) equipment can be [calibrated](#) or [verified](#), or both, at specified intervals, or prior to use, against [measurement](#) standards [traceable](#) to international or national [measurement](#) standards – refer to section E.5.5.3 [Calibration](#).

#### **E.5.4.3.3. Contingency equipment**

≤ The [organisation](#) should ensure that it has suitable and sufficient equipment to support its [contingency arrangements](#) and that it is readily [available](#) for use when [required](#) – refer to section E.8.2.2 [Emergencies, Crises and Disaster Recovery](#).

#### **E.5.4.3.4. Data equipment**

≤ Controls should be implemented to ensure that [data](#) is [effectively](#) and [efficiently](#) stored and [processed](#), as necessary while [maintaining confidentiality](#), [availability](#), [integrity](#) and [availability](#). Unauthorized disclosure, modification, removal or destruction of [data](#) should also be prevented.

Equipment containing or having the potential to contain [data](#) should be controlled, [as appropriate](#), over its complete [life cycle](#) to ensure the [effective](#) and [efficient management](#) of [data](#) covered in section 0 [Data](#). This may include various types of fixed and portable [data](#) media requiring specific [management](#) controls to ensure the [effective](#) and [efficient maintenance](#) and [processing data](#) embracing [confidentiality](#), [availability](#) and [integrity](#). This is facilitated by the [classification](#) of equipment according to its potential to impact [stakeholder prospects and risks](#) based on their [needs](#) and [expectations](#) – refer to section E.1.1.1 [Foundation planning](#).

Portable [data](#) media with the potential to [significantly](#) impact [stakeholder needs](#) and [expectations](#) should be avoided wherever possible as establishing [effective](#) and [efficient](#) control is more difficult than with fixed media.

#### **E.5.4.3.5. Mobile plant and equipment**

≤ Mobile plant and equipment should be subject to additional controls because of the varying environments in which may be transported, stored, operated and interfaced with other plant and equipment. It is also potentially subject to greater unauthorised interference that may harm personnel (including children), the environment and the plant or equipment.

#### **E.5.4.3.6. External fixed plant and equipment**

≤ Fixed plant and equipment external to a facility may include services such as water, gas, power and telecommunications supporting [facilities](#). Arrangements should be put in place to [operate](#), [maintain](#)

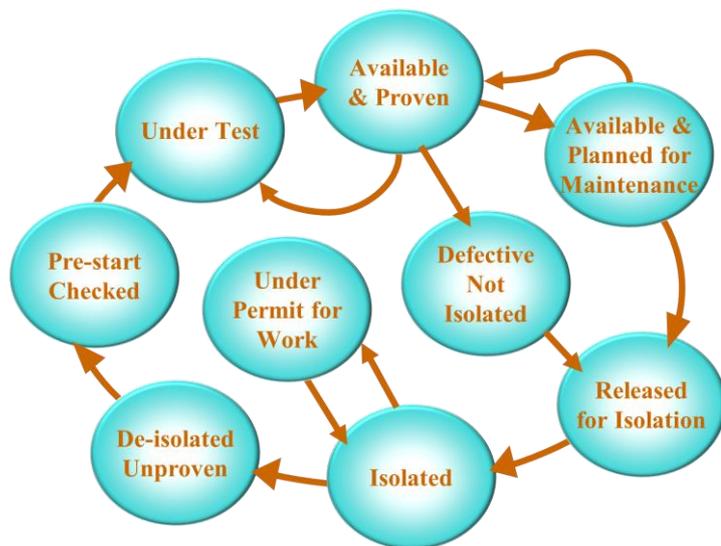
and [secure](#) these services from interference and damage. [Data](#) transmission services should additionally be protected from interception.

**E.5.4.4. Configuration**

≤ The way that the parts of a [structure](#) are configured generally [impact](#) its functionality and its ability to fulfil its intended [purpose](#) or [purposes](#) and when incorrectly configured may even cause [significant harm](#). [Organisations](#) should therefore [determine](#) the [prospect and risk](#) associated with the potential [configurations](#) of [structures](#) as per section E.1.6 [Prospect and risk assessment](#). It is often necessary for [structure](#) to be configured in multiple ways to facilitate its [manufacture](#), construction, commissioning, [operation](#), [testing](#), [inspection](#), [maintenance](#) and decommissioning etc.

Common examples of the [need](#) for [configuration management](#) occur in [structures](#) associated with [manufacture](#), transport, power distribution, [process](#) plant and computer [systems](#). The ability to configure a [system](#) in multiple ways is often a [design](#) feature to improve its [performance](#) by increasing [availability](#) and reducing [risk](#) of [failures](#). However, some [configurations](#) must be prohibited when the [prospect and risk assessment](#) indicates that they increase the [risk](#) of [harm](#) occurring. Undesired [configurations](#) should ideally be prohibited from occurring via engineered controls and otherwise administrative controls.

The [required](#) status of a particular desired [configuration](#) should be confirmed by appropriate [verification](#) and [validation processes](#) e.g. confirming the status of an aircraft prior to take-off. An example of a [configuration status management system](#) for [safety](#) critical plant [systems](#) is shown in Figure 17: Configuration Status Example. The status of any item of plant changes depending on whether it is [available](#) and proven for [service](#), is defective, undergoing routine checking and [testing](#), is defective, [planned](#) for or undergoing breakdown or [planned maintenance](#), isolated and under the control of the [permit for work system](#) etc. The [configuration](#) and status of the plant [impacts](#) the [organisation's](#) ability and potential to deliver it's [purpose](#) at a particular time and to demonstrate compliance with [customer](#) and [stakeholder requirements](#) as well as [managing](#) an [effective](#) [unplanned](#) and [planned maintenance](#), [inspection](#) and [test](#) program – refer to sections C [Specific Requirements Guidance](#) and C.5.5 [Maintenance, inspection, testing and calibration](#).



**Figure 17: Configuration Status Example**

The [configuration](#) and status of the plant [impacts](#) the [organisation's](#) ability and potential to deliver it's [purpose](#) at a particular time and to demonstrate compliance with [customer](#) and [stakeholder requirements](#) as well as [managing](#) an [effective](#) [unplanned](#) and [planned maintenance](#), [inspection](#) and [test](#) program – refer to sections C [Specific Requirements Guidance](#) and C.5.5 [Maintenance, inspection, testing and calibration](#).

[Configuration management](#) is often complex enough to require computer [software](#) to [manage](#) it to optimise the [availability](#) of the [system](#) while retaining [risks](#) within specified limits.

[Configuration management](#) is often a key part of a formally [defined system of work](#) – refer to section E.7.1.4 [Significant prospect and risk systems of work](#).

#### **E.5.4.5. Access, egress and protective barriers**

< [Access](#) and egress should take account of physical barriers, working at height and confined spaces.

Multiple [diverse](#) barriers may be used to reduce [risk](#) employing [defense in depth](#) – refer to E.1.6.5 [Prospect and risk improvement](#).

Physical barriers acting as a material containment should be [designed](#) such that if degradation occurs they ideally initially leak rather than fail catastrophically.

See also section E.5.4.2 [Work environment](#).

### **E.5.5. Maintenance, inspection, testing and calibration**

< The [organisation](#) should [maintain](#) formal [arrangements](#) for [managing](#):

- E.5.5.1 [Proactive maintenance, inspection and testing](#),
- E.5.5.2 [Reactive maintenance, inspection and testing](#),
- E.5.5.3 [Calibration](#).

The [management](#) of [maintenance](#), [inspection](#), [testing](#) and [calibration](#) should be informed or directed by:

- [Manufacturer's](#) information, recommendation and [expert](#) advice,
- Legislation, regulatory and standards [requirements](#) – refer to section E.1.5 [Legislation and standards](#),
- [Performance](#) justification – refer to section E.1.7 [Performance justification](#),
- [Reactive event investigation](#) experience – refer to section 0 [Reactive Investigation](#),
- [Planned monitoring](#) experience – refer to section 0 [Planned Monitoring](#),
- [Management review](#) – refer to section 0 [Review and Action](#).

Where [practicable](#) invasive [maintenance](#) should be avoided by using non-invasive [condition monitoring](#).

The [management](#) of [maintenance](#), [inspection](#), [testing](#) and [calibration](#) and the retaining of [records](#) may be enhanced by using a computer [software database](#) – refer to section E.4.2.1 [Databases](#).

#### **E.5.5.1. Proactive maintenance, inspection and testing**

< [Proactive maintenance](#) should be [managed](#) to ideally ensure that [infrastructure](#) is continuously [available](#) to meet [planned operational requirements](#) and minimize the [need](#) for [reactive maintenance](#), [inspection](#) and [testing](#) – refer to section E.5.5.2 [Reactive maintenance, inspection and testing](#).

Any [outsourced](#) work or [services](#) should be carried out by approved [suppliers](#) – refer to section 0 [Suppliers](#).

### E.5.5.2. Reactive maintenance, inspection and testing

≤ The [organisation](#) should have its own or [accessible arrangements](#) for reasonably foreseeable potential [requirements](#) for [reactive maintenance](#), [inspection](#) and [testing](#) informed by [prospect and risk assessment](#) – refer to section E.1.6 [Prospect and risk assessment](#).

### E.5.5.3. Calibration

≤ The [organisation](#) should define [arrangements](#) for ensuring that [measuring](#) equipment is suitably [calibrated](#) for it's [purpose](#), either routinely or prior to its use.

## E.5.6. Waste and emissions and emissions

≤ The [organisation](#) should minimize the [creation](#) of [waste](#) and [emissions](#) and their [impact](#) on personnel and [environmental safety](#) and [health](#), as well as [stakeholder needs](#) and [expectations](#), while making the best use of [resources](#). This should be achieved through the [design](#) and [operation](#) of [effective](#) and [efficient structures](#) and [processes](#) – refer to section E.7.1 [Structure and process design and development](#). The following [waste controls hierarchy](#) should be applied and is listed in order of preference:

- [Waste prevention and minimization](#),
- [Waste reuse](#),
- [Waste recycling](#),
- [Waste energy recovery](#),
- [Waste disposal](#).

The aim of the [waste controls hierarchy](#) is to extract the maximum practical benefits from [goods](#) and to generate the minimum amount of [waste](#). The proper application of a [waste controls hierarchy](#) helps to prevent [emissions](#) of greenhouse gases, reduces pollutants, saves energy, conserves [resources](#), create jobs and stimulate the development of green technologies.

Overall, attempts should be made to optimise the total [life cycle](#) of the [structures](#) and [processes](#) and may under certain circumstances necessitate a departure from the [waste controls hierarchy](#) e.g. when a balance has to be made between energy use and [waste](#) production and its [processing](#).

### Waste prevention and minimization

[Prevention](#) or reduction minimizes the generation of [waste](#) products in the first place. [Prevention](#) usually results in the least [environmental](#) and [economic life cycle](#) costs because it requires no collecting or [processing](#) of materials. It involves using less material in [design](#) and [manufacture](#), trying to keep [goods](#) for longer, and using less [hazardous](#) materials.

### Waste reuse

[Waste](#) reuse is any [operation](#) where [goods](#) or materials that are not [waste](#) are used again for the same [purpose](#) for which they were intended. Reusing [waste](#) often requires collection but relatively little or no processing. It involves checking, cleaning, [repairing](#), and/or refurbishing, entire items or spare parts.

### Waste recycling

Recycling of [waste](#) is any activity that includes the collection of used, reused, or unused items that would otherwise be considered [waste](#). Recycling involves sorting and [processing](#) the recyclable products into raw material and then remanufacturing the recycled raw materials into new goods.

### **Waste recovery**

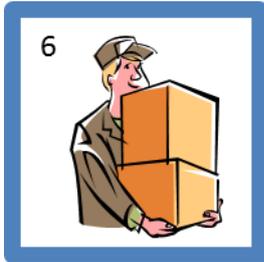
The recovery of [waste](#) covers materials recovery and of energy recovery. The one that is better for the environment and human health is preferred. The recovery of materials involves activities such as recycling and composting. The recovery of energy, such as incineration, is usually the less preferred option. The conversion of non-recyclable [waste](#) materials into usable heat, electricity, or fuel is done through a variety of processes, including anaerobic digestion, gasification, and pyrolysis.

### **Waste disposal**

[Waste](#) disposal is the final least preferred option. Disposal is any operation that involves the dumping and incineration of [waste](#) without energy recovery. Before final disposal, a considerable amount of pre-treatment may be necessary to change the characteristics of the [waste](#) to reduce the quantity or harmfulness of the [waste](#) and that may include physical, thermal, chemical, or biological processes. Landfills are the most common form of [waste](#) disposal and the final disposal option.

Disposal of [waste](#) containing data must be carefully controlled according to its [classification](#) – refer to section E.1.6.2 [Classification of structures and processes](#).

## E.6. Suppliers



E.6.4 [Performance evaluation](#).

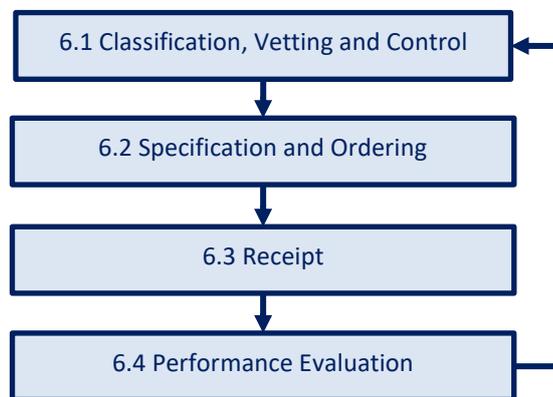
≤ This section covers the [life cycle management](#) of [suppliers](#) from initial approval, taking a [prospect and risk informed](#) approach, through to [performance](#) evaluation and grading including:

E.6.1 [Classification, vetting and control](#),

E.6.2 [Specification and ordering](#),

E.6.3 [Receipt](#),

The goal of [supplier](#) and [supply chain management](#) is to ensure that [outsourcing](#) adds [value](#) and equivalent standards are achieved to those conducted within the [organisation](#).



**Figure 18: Suppliers Subsections**

### E.6.1. Classification, vetting and control

≤ Smaller [organisations](#) may only need to be concerned with external [suppliers](#) but [organizational](#) units within larger [organisations](#) should [identify significant](#) internal [suppliers](#) existing within the [organisation](#) as a whole or a parent [organisation](#) to ensure [effective management control](#).

An example of a [supplier classification system](#) is shown in [Appendix 5.1 Classification of Suppliers Example](#). Provision may be made for recording the [classification](#) in the financial accounting [software databases](#). This makes the [data](#) conveniently [available](#) when [commercial](#) transactions are being considered. See also to section E.6.1 [Classification, vetting and control](#).

Questionnaires are common instruments used to obtain [data](#) from an [organisation](#) in a [structured](#) way but [data](#) can be assembled and evaluated from any reliable source. [Organisations](#) should [verify data](#) where there is a credible possibility of it being false where the [supplier](#) is critical to the [organisation's operations](#) and reputation.

[External audit \(second party\)](#) and/or [inspection](#) covered in sections E.11.3 [External audit](#) and E.11.5 [Inspection](#) can provide considerable information and [knowledge](#) about [suppliers operations](#) which cannot easily be obtained by other means and can also help establish a valuable interactive relationship assisting both parties.

Overall the [objective](#) should be by one or more means to achieve an appropriate level of confidence that the [supplier](#) is capable of delivering [goods](#) and/or [services](#) compliant with the [organisation's policy](#) and [objectives](#) – refer to sections E.1.3 [Policy statement](#) and E.1.4 [Objectives](#). What is necessary to achieve the [required](#) level of confidence for one [good](#) or [service](#) may not be the same for a different [good](#) or [service](#).

[Supplier classification](#), vetting and control [processes](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Rag status reports](#)
- ❖ [Surveys](#)
- ❖ [Tables](#)
- ❖ [Tree diagram](#)

### **E.6.2. Specification and ordering**

≤ Specification and ordering [structures](#) and [processes](#) should ensure that [requirements](#) are fully assessed, comply with [policy](#) and [objectives](#) and are appropriately approved.

### **E.6.3. Receipt**

≤ Received [goods](#) may include energy, matter, [data](#) or a combination.

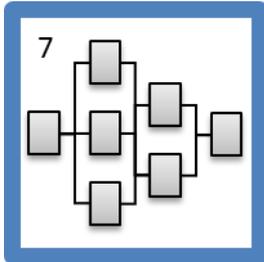
The [organisation](#) should establish [practicable arrangements](#) for [verifying](#) that received [goods reconcile](#) with the order specification and that the delivery is complete and in a satisfactory [condition](#).

### **E.6.4. Performance evaluation**

≤ The [organisation](#) should establish formal [arrangements](#) for compiling [supplier performance](#) and evaluating it to act as an informed basis for possibly reusing the supplier in the future for a specific [purpose](#). A [supplier](#) may be deemed satisfactory for one [purpose](#) but not another.

An example of a [supplier performance](#) evaluation grading [system](#) is shown in [Appendix 5.2 Supplier Performance Grades Example](#). Provision can be made for recording the grades in the financial accounting [software database](#). This makes the [data](#) conveniently [available](#) when [commercial](#) transactions are being considered.

## E.7. Normal Structures and Processes



< [Organisation's](#) and [projects](#) should focus their primary attention on the [effectiveness](#) and [efficiency](#) of its [structures](#) and [processes](#) to fully fulfil its [purpose](#) and [equitably](#) satisfy the [needs](#) and [expectations](#) of the [customer](#) and other [stakeholder needs](#) and [expectations](#) while making the best use of [resources](#).

[Normal structures](#) and associated [normal processes](#) cover all of the [organisation's structures](#) and [processes](#) (including [goods](#) and [services](#)) that are intended to deliver [value](#) internally and externally including [projects](#) directly or indirectly fulfilling the [purpose](#) of the [organisation](#) except [contingency processes](#) covered separately in section 0 [Contingencies](#).

It covers the intelligent, [creative](#) and [innovative](#) integration of the following five elements to providing [value](#) to [customers](#) and other [stakeholders](#) aligning with the [organisation's purpose](#):

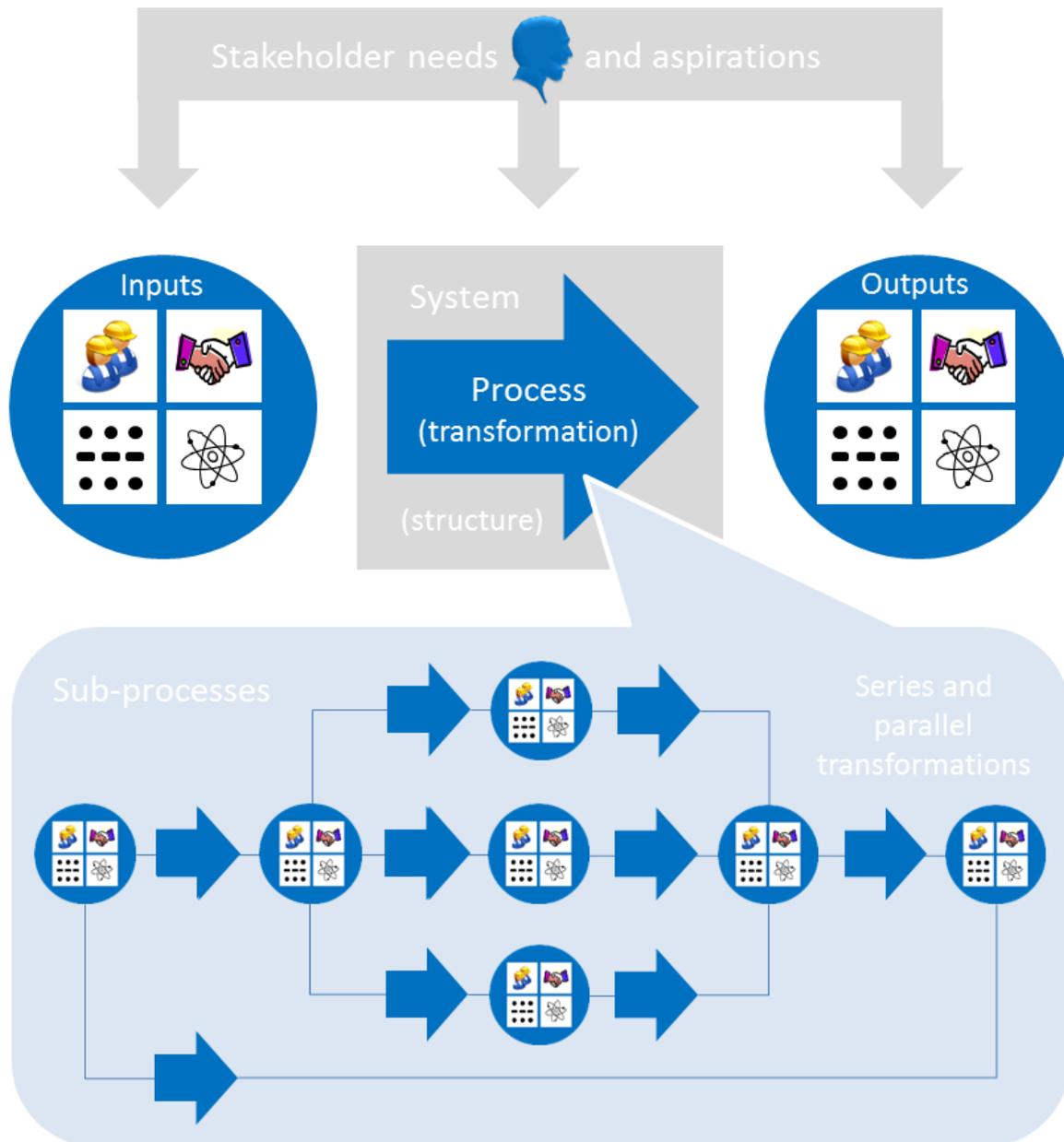
- 0 [Personnel](#)
- 0 [Commerce](#)
- 0 [Data](#)
- 0 [Matter and Energy](#)
- 0 [Suppliers](#)

This section covers what is delivered and the [process](#) of its delivery that may [impact stakeholder needs](#) and [expectations](#) differently. [Stakeholders](#) may be [impacted](#) by [structures](#) and the conduct of [processes](#) including the inputs and outputs according to their respective [needs](#) and [expectations](#) – refer to section E.1.1 [Foundation planning](#).

Within the collective [structure](#) of the [organisation](#) and its [suppliers](#), [processes](#) transform inputs into outputs via series and parallel sub-[processes](#) shown conceptually in Figure 19: Normal Processes.

The [management system](#) may [define](#) generic and/or specific [process](#) constraints to direct and guide [processes](#). The constraints may precisely [define](#) the [process](#) or [define](#) an envelope forming a boundary that [processes](#) must not transgress. Constraints are [defined](#) within appropriate [management system documents](#) as per section E.4.1 [Management system structure](#).

They may include core, supporting and [contingency processes](#). Because of their different nature, [contingency processes](#) are covered separately in section 0 [Contingencies](#).



**Figure 19: Normal Processes**

[Goods](#) and [services](#) are principally delivered through the combination of:

- E.1 [Assessment and Development of Controls](#),
- 0 [Personnel](#),
- 0 [Commerce](#),
- 0 [Data](#),
- 0 [Matter and Energy](#),
- 0 [Suppliers](#).

[Core processes](#) typically cover:

- Sales and [marketing](#),
- Establishing orders and [contracts](#),
- Fulfilling orders and [contracts](#),

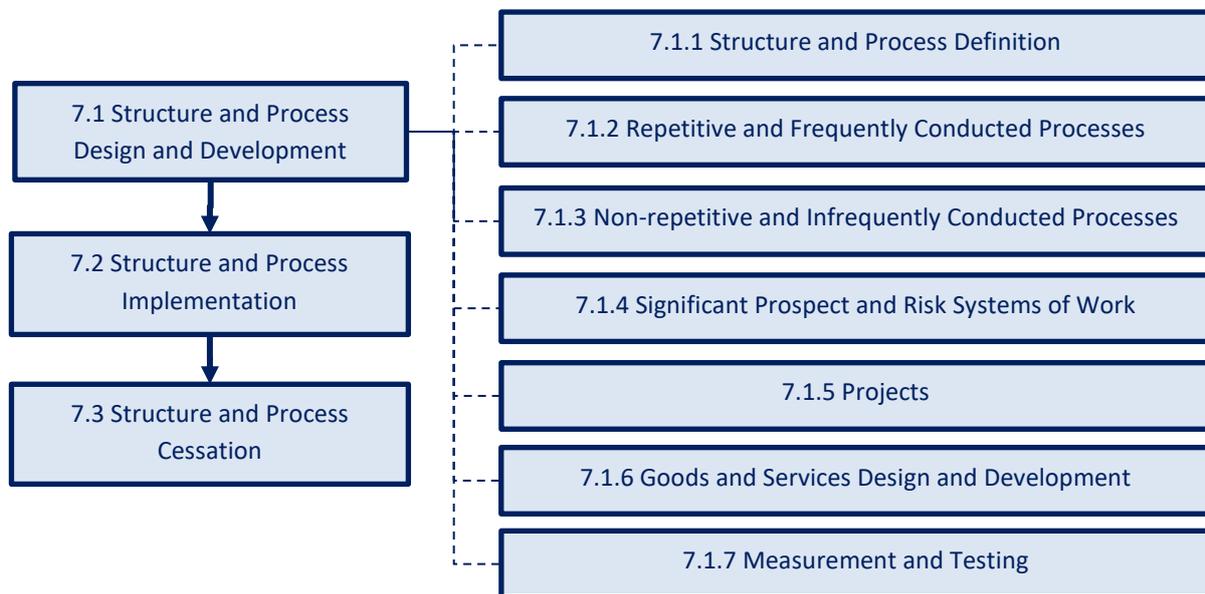
- [Processing](#) payment for [goods](#) and [services](#).

[Supporting processes](#) typically cover:

- Maintaining the [organisation](#) as an [entity](#),
- Recruitment and [maintenance](#) of [competent](#) personnel,
- Paying salaries and other obligations,
- [Infrastructure management](#),
- Archiving of [records](#).

Good [lean design](#) of [structures](#) and [processes](#) and their overall harmonious integration should promote the [effective](#) and [efficient operation](#) of the [organisation](#).

The [organisation](#) may make use of [expert](#) advisers, other [organisations](#) and approved [suppliers](#) to [design](#), establish, [operate](#), [maintain](#), modify, decommission and dismantle [structures](#) and [processes](#).



**Figure 20: Normal Structures and Processes Subsections**

### E.7.1. Structure and process design and development

≤ Diagrammatic representation of [structures](#) and [processes](#) and their interactions is typically used to aid [communication](#) and understanding of how [processes](#) interact and are dependent on each other.

Personnel involvement in the [design](#) of [structures](#) and [processes](#) should take place as per section 0 [Internal communication, consultation, participation and reporting](#).

Personnel [competence](#), [fitness](#) and [stress](#) are very important [aspects](#) that [impact](#) personnel and [process performance](#) and should be taken account of in [process design](#) – refer to section E.2.4.4.4 [Fitness](#).

The adoption of clear and logical [conventions](#) can simplify [operation](#) and [maintenance](#) and reduce the [likelihood](#) of [human error](#) – refer to section E.4.4 [Conventions](#).

The control of repetitive [processes](#) may be aided by using [statistical process control](#).

Anti-corruption measures should form part of [structure](#) and [process design](#) – refer to section E.7.1 [Structure and process design](#).

The design and development of [structures](#) and [processes](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Activity network \(critical path\)](#)
- ❖ [Brainstorming](#)
- ❖ [Cause and effect analysis](#)
- ❖ [Concentration diagrams](#)
- ❖ [Control charts](#)
- ❖ [Cost benefit analysis](#)
- ❖ [Critical path analysis](#)
- ❖ [Data handling and display](#)
- ❖ [Decision tree](#)
- ❖ [Design of experiments](#)
- ❖ [Failure mode and effects analysis](#)
- ❖ [Failure prevention analysis](#)
- ❖ [Flow chart](#)
- ❖ [Gantt chart](#)
- ❖ [Hierarchical task analysis](#)
- ❖ [How-how diagrams](#)
- ❖ [Infrastructure tour](#)
- ❖ [Icam-definition](#)
- ❖ [Interviews](#)
- ❖ [Latin hypercube](#)
- ❖ [Line graph](#)
- ❖ [Linear programming](#)
- ❖ [Matrix data analysis chart](#)
- ❖ [Matrix diagram](#)
- ❖ [Monti carlo analysis](#)
- ❖ [Nominal group technique](#)
- ❖ [Pareto analysis](#)
- ❖ [Pareto charts](#)
- ❖ [Portfolio analysis](#)
- ❖ [Prioritization matrix](#)
- ❖ [Process capability](#)
- ❖ [Process decision program chart](#)
- ❖ [Process flow charts](#)
- ❖ [Profile graphs](#)
- ❖ [Prospect and/or risk modelling and risk simulation](#)
- ❖ [Prospect and/or risk register/database](#)
- ❖ [Prospect and/or risk register/database](#)
- ❖ [Rag status reports](#)
- ❖ [Ranking and rating](#)
- ❖ [Relations diagram](#)
- ❖ [Resource analysis](#)
- ❖ [Checklists](#)
- ❖ [Scatter diagram](#)

- ❖ [Sensitivity analysis](#)
- ❖ [Stakeholder analysis](#)
- ❖ [Stakeholder engagement matrices](#)
- ❖ [Strengths weaknesses, opportunities and threats analysis](#)
- ❖ [Stress testing](#)
- ❖ [String diagram](#)
- ❖ [Surveys](#)
- ❖ [Tables](#)
- ❖ [The decision model](#)
- ❖ [Tree diagram](#)
- ❖ [Uncertainty analysis](#)
- ❖ [Utility theory](#)
- ❖ [Value analysis](#)
- ❖ [Waterfall charts](#)
- ❖ [Why – why diagrams](#)

#### **E.7.1.1. Structure and process definition**

≤ [Structure and process definitions](#) should assist in the optimizing of what is covered within the [organisation's](#) scope and act as a basis for [review](#), improvement and recording [explicit knowledge](#).

#### **E.7.1.2. Repetitive and frequently conducted processes**

≤ It is possible to readily [observe](#) and measure the [performance](#) of repetitive and frequently conducted [processes](#) e.g. mass production within a factory. They readily lend themselves to [prospect and risk assessment](#) because of the potential to collect an abundance of measured [data](#). This [data](#) is capable of statistical [analysis](#) providing confidence in the [performance](#) of the [process](#) and may also be used to control the [process](#) known as [statistical process control](#).

#### **E.7.1.3. Non-repetitive and infrequently conducted processes**

≤ Unlike repetitive and frequently conducted [processes](#), non-repetitive and infrequently conducted [processes](#) by their nature provide much smaller amounts of [data](#) making statistical inference and [statistical process control](#) impractical and also providing less confidence that the [process](#) will be reliable. Typical examples are bespoke [projects](#) and large industrial plants subject to low frequency major [hazard events](#). Non-repetitive and infrequently conducted [processes](#) also generally include [contingency processes](#) covered in section 0 [Contingency arrangements implementation](#).

Confidence in non-repetitive and infrequently conducted processes can be enhanced through [planned maintenance](#), [inspection](#) and [testing](#) as per section E.5.5 [Maintenance, inspection, testing and calibration](#) as well as other [assurance processes](#), as well as the estimation of overall [performance](#) via the [synthesis](#) of [performance data](#) relating to the [performance](#) of component [process](#) elements.

There is a general lack of [knowledge](#) when it comes to rare [events](#) with serious consequences due to the rarity of the occurrence of such [events](#). In such circumstances, the [organisation](#) should apply the [precautionary principle](#) – refer to section E.1.6.8 [Residual prospect, risk and controls acceptance](#).

#### E.7.1.4. Significant prospect and risk systems of work

≤ An example of a [system of work](#) is a [safe system of work](#) that [defines](#) controls to prevent personnel [harm](#) when conducting [hazardous](#) tasks such as working in a confined space. Another [system of work](#) could be that to optimise the [likelihood](#) of winning a [contract](#).

[Systems of work](#) may be [defined](#) within [project plans](#), method statements, [work instructions](#), formal [systems](#) of rules and may control permit [forms](#), [as appropriate](#).

[Systems of work](#) typically involve [configuration management](#) – refer to section E.5.4.4 [Configuration](#).

Some [systems of work](#) may be [defined](#) generically to be used in combination with other [process](#) control measures.

#### E.7.1.5. Projects

≤ [Projects](#) may be delivered externally or internally and vary in size, complexity and duration. [Projects](#) should have a [defined purpose](#) and [plan](#) that takes account of the [contractual](#) and other [stakeholder needs](#) and [expectations](#).

[Project](#) milestones normally align with formal or informal [contract requirements](#) – refer to section E.3.3 [Contracts](#).

[Project documentation](#) ([data](#)) [requirements](#) typically include the following [aspects](#) which should adequately be addressed during [project](#) proposal and implementation and during the [review](#) of completed proposals and prior to the starting of an agreed [project](#):

- [Definitions](#) of [project organisation](#), [responsibilities](#) and [authorities](#) including interfaces with other [project organisations](#),
- Working language(s) and [need](#) for translation and supervision of those not speaking working language(s),
- Interfaces with the [customer](#) and other [stakeholders](#),
- [Contracts](#) and [definitions](#) of [good/service](#) and accompanying information to be delivered to [customer](#),
- [Definitions](#) of general [customer](#) and other [stakeholder requirements](#) including applicable standards and legislation,
- Notifications and submissions [required](#) by legal bodies,
- [Project](#) implementation [plan\(s\)](#),
- Key [definitions](#) used to control and report the status of [structures](#) and [processes](#),
- Existing historical [hazard](#) and [risk](#) information (including surveys),
- Preliminary surveys and [risk assessments](#) conducted by the [project organisation](#) or other parties,
- [Requirements](#) to [safeguard customer](#) property including [goods](#) supplied directly by the [customer](#),
- [Structures](#) and [processes](#) to deliver the [good/service](#),
- [Requirements](#) for [identification](#) and [traceability](#) of delivered [goods defined](#),
- [Requirements](#) for [verification](#) and/or [validation](#),
- [Requirements](#) for [measurement](#) and [measuring](#) equipment,
- [Requirements](#) for human, plant, equipment and materials [resources](#),
- [Requirements](#) for [monitoring](#) equipment and [calibration](#),
- [Requirements](#) for preservation and [safety](#) of [goods](#) during [manufacture](#), transport, storage, installation, commissioning, decommissioning, demolition and disposal,

- Identified personnel [welfare requirements](#) when working away from base,
- Purchasing [requirements](#) identified (approval of [suppliers](#) and subcontractors,
- [Project monitoring requirements](#),
- [Requirements](#) for [record](#) generation, retention and sharing.

[Organisations](#) may benefit by adopting an 'out of the box' approach where [project management arrangements](#) are as far as possible [defined](#) using generic [structures](#), [processes](#) and [document template\(s\)](#)s. This also helps ensure compliance with the [organisation's management system](#) and best practice and provide a foundation and [structure](#) for periodic generic [project management review](#), [continual](#) improvement and alignment with [stakeholder needs](#) and [expectations](#).

[Project planning](#) and control [processes](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Activity network](#)
- ❖ [Cost benefit analysis](#)
- ❖ [Critical path analysis](#)
- ❖ [Decision tree](#)
- ❖ [Design of experiments](#)
- ❖ [Flow chart](#)
- ❖ [Gantt chart](#)
- ❖ [Hierarchical task analysis](#)
- ❖ [Infrastructure tour](#)
- ❖ [Interviews](#)
- ❖ [Line graph](#)
- ❖ [Linear programming](#)
- ❖ [Process flow charts](#)
- ❖ [Profile graphs](#)
- ❖ [Prospect and/or risk register/database](#)
- ❖ [Rag status reports](#)
- ❖ [Ranking and rating](#)
- ❖ [Resource analysis](#)
- ❖ [Checklists](#)
- ❖ [Stakeholder analysis](#)
- ❖ [Stakeholder engagement matrices](#)
- ❖ [Strengths weaknesses, opportunities and threats analysis](#)
- ❖ [Stress testing](#)
- ❖ [Surveys](#)
- ❖ [Tables](#)
- ❖ [Tree diagram](#)
- ❖ [Uncertainty analysis](#)
- ❖ [Utility theory](#)
- ❖ [Value analysis](#)
- ❖ [Waterfall charts](#)

#### E.7.1.6. Goods and services design and development

< [Goods](#) and [services](#) are delivered via an [organisation's](#) or [project's normal structures](#) and associated [normal processes](#) – refer to section 0 [Normal Structures and Processes](#), as a whole.

The [design](#) and development of [goods](#) and [services](#) should:

- Align as closely as possible with [stakeholder needs](#) and [expectations](#) via careful [market research](#), [prospect and risk assessment](#) – refer to section C.3.2 [Marketing](#),
- Attempt to differentiate them from competitors [goods](#) and [services](#) through the application of [creativity](#) to stimulate [innovation](#),
- Consider the [prospects and risks](#) of [goods](#) and [services](#) over their entire [planned](#) life with respect to [customers](#) and other [stakeholders](#),
- Optimise the [effectiveness](#) and [efficiency](#) of the [design](#) and development delivery [processes](#) while making the best use of [resources](#) and increase the [likelihood](#) of fully satisfying [requirements](#) including [quality](#), on time delivery and profitability.

#### **E.7.1.7. Measurement and testing**

≤ [Measurement](#) provides [data](#) for [processing](#) as per section E.4.3 [Data processing](#) supporting E.4.3.1 [Accounting](#) and E.4.3.2 [Indicators](#) and where appropriate [statistical process control](#) as per section E.7.1 [Structure and process design](#). Metrological methods may be used to facilitate accurate and reliable [measurement](#).

#### **E.7.2. Structure and process implementation**

≤ Suitable and sufficient documentation should be developed and made [available](#) to allow structures and processes to be operated and maintained – refer to E.4.1 [Management system structure](#).

[Resource](#) levels should take account of the [need](#) to [manage contingency processes](#) should normal [processes](#) fail. Sufficient levels of [competent](#) personnel need to be [available](#) to implement [emergency arrangements](#). Critical spares need to be [available](#) held by the [organisation](#) or reserved for the [organisation](#) by a supplier. [Arrangements](#) may need to be [coordinated](#) across the [organisation](#) and between other [organisations](#).

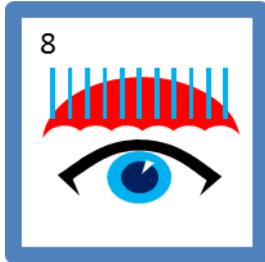
#### **E.7.3. Structure and process cessation**

≤ [Organisations](#) should endeavour to ensure that end of the life of [structures](#) and [processes](#) are [effectively managed](#) to satisfy the [needs](#) and [expectations](#) of [customers](#) and other [stakeholders](#) while making the best use of [resources](#) be they people (including [tacit knowledge](#)), [commercial relationships](#), [data](#) (including [explicit knowledge](#), [intellectual property](#)), matter, energy, [supplier relationships](#) etc.

[Contingency arrangements](#) should be developed, made ready and implemented, as necessary, for unscheduled permanent or temporary cessation of [structures](#) and [processes](#) – refer to section 0 [Contingency Structures and Processes](#).

Cessation needs to be addressed as part of the [design](#) of [structures](#) and [processes](#) and periodically [reviewed](#) to ensure it remains appropriate – refer to sections E.7.1 [Structure and process design](#) and 0 [Review and Action](#).

## E.8. Contingency Structures and Processes



≤ The [need](#) for [contingency structures](#) and [processes arrangements](#) should be determined via [prospect and risk assessment](#) and [requirements](#) of legislation, [as applicable](#) - refer to sections E.1.6 [Prospect and risk assessment](#)

[Contingency structure](#) and [process arrangements](#) are needed to [mitigate risk](#) after there has been a disfunctionality or [failure](#) of the [organisation's normal structures](#) and/or [normal processes](#) and to attempt to maximise the [prospect](#) of restoring the normal functionality of the [organisation](#). [Contingency arrangements](#) may also be [required](#) to cope with a [significant](#) realised [prospect](#) that [normal processes](#) cannot cope with. The aim is to minimize the disruption to [normal structures](#) and [normal processes](#), negative impacts on the organisation and to minimize the time between the loss of [normal structures](#) and [normal processes](#) and their reestablishment. A [contingency process](#) and its relationship to a [normal processes](#) are shown conceptually in Figure 21: Contingency Process.

[Failure](#) of the [organisation's](#) normal functionality may be triggered by an internal or an external [event](#) which may involve disruption or degradation of [structure](#) and/ [process](#). [Contingency arrangements](#) typically include such issues as the [need](#) for [corrective action](#) and [preventive action](#), [emergencies](#), [crises](#), [goods](#) recalls and [disaster recoveries](#). The [objective](#) of [contingency arrangements](#) is to return to the [organisation](#) or [project](#) to normal [operation](#) as [effectively](#) and [efficiently](#) as possible making the best use of [resources](#) while minimising loss.

The [design](#) and [operation](#) of [contingency processes](#) presents a particular challenge because the [processes](#) are often triggered infrequently or not at all and the exact circumstances when [contingency processes](#) are [required](#) to [operate](#) can vary and often cannot be precisely predicted. This requires that [contingency structures](#) and [processes](#) take account of [prospect and risk assessments](#) and are carefully tested using simulated [conditions](#) where necessary.

Because situations requiring the [operation](#) of [contingency arrangements](#) are often very infrequent, as is the case with low frequency major [impact events](#), there can be denial by directors and leaders that such [events](#) may realistically occur accompanied by a resistance to invest [management resource](#) into their development and [maintenance](#).

For situations which are complicated or complex and diagnosis is critical to successfully [managing](#) the situation a symptom-based approach may be employed. Such approaches are typically used in the major [hazard](#) industries during [emergencies](#).

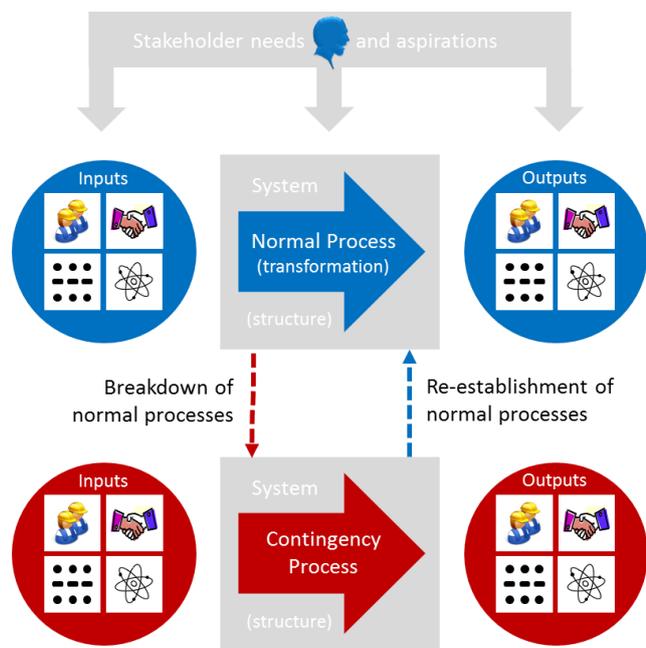
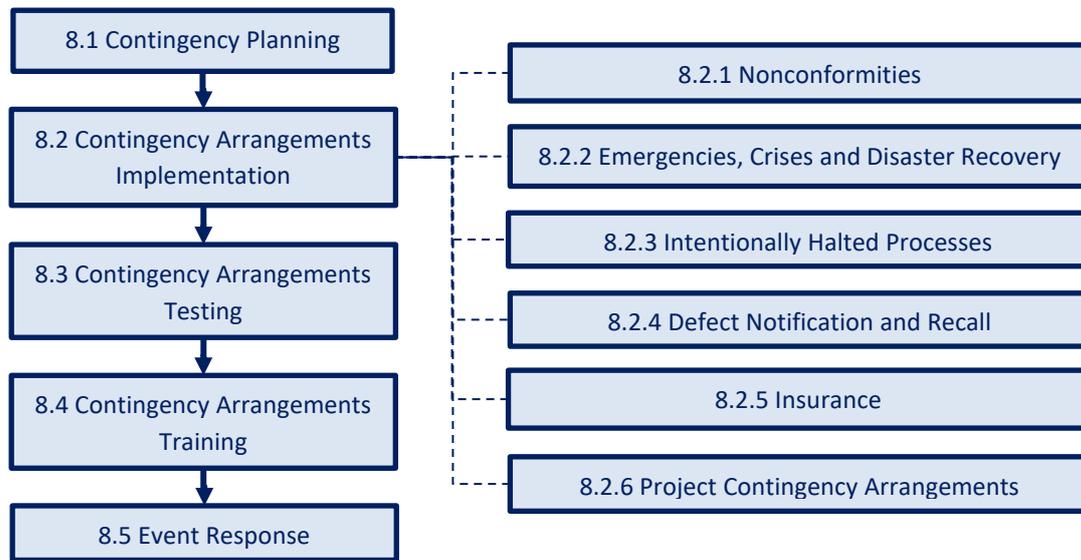


Figure 21: Contingency Process

Although not covered in this section, management of conflict may technically be classed as a contingency process – refer to section E.2.5.3 [Management of conflict](#).



**Figure 22: Contingency Structures and Processes Subsections**

### E.8.1. Contingency planning

< [Contingency planning](#) should cover the [identification](#) of the [need](#) for [organisation](#) and [project structures](#) and [processes](#) that are able to:

- Deal with revealed nonconformities and other circumstances requiring [corrective action](#),
- Take over from the [organisation's](#) normal [processes](#) when they are stressed and not coping or have become dysfunctional,
- Respond to any un[planned events threatening](#) the normal functioning of the [organisation](#) or [significant stakeholder needs](#) and [expectations](#).

The [planning process](#) should be based on or informed by:

- Legislation and adopted standards,
- General [stakeholder needs](#) and [expectations](#),
- [Prospect and risk assessment](#),
- Industry good practice experience.

[Contingency planning](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Bowtie](#)
- ❖ [Interviews](#)
- ❖ [Prospect and/or risk register/database](#)
- ❖ [Rag status reports](#)
- ❖ [Strengths weaknesses, opportunities and threats analysis](#)
- ❖ [Stress testing](#)
- ❖ [Surveys](#)
- ❖ [Tables](#)

- ❖ [Tree diagram](#)
- ❖ [Value analysis](#)

## E.8.2. Contingency arrangements implementation

≤ The [organisation](#) should ensure that [contingency structures](#) and [processes](#) covered within its or other bodies' [contingency plans](#) are directly [available](#) or can readily be called upon should it be necessary to initiate [contingency processes](#) when [required](#). This may involve establishing [contracts](#) with approved [suppliers](#) or partnering with other [organisations](#).

### E.8.2.1. Nonconformities

≤ The [organisation](#) should ensure that it is constantly vigilant for nonconformities throughout its [structures](#) and [processes](#) and have a formal [process](#) for [tracking](#) their lifecycle from [identification](#) to [correction](#) – refer to sections 0 [Reactive Investigation](#) and 0 [Planned Monitoring](#). Concessions should be formally agreed and [recorded](#) when it is deemed acceptable not to correct the [nonconformity](#).

[Nonconforming structure](#) should be appropriately marked and/or [segregated](#) or [secured](#) from conforming [structure](#) and other appropriate [actions](#) taken, as necessary, to minimize the [impact](#) of the [nonconformity](#) on the normal functionality of [structures](#) and [processes](#) – refer to section E.4.4 [Conventions](#).

Relevant [prospect and risk assessments](#) should be [reviewed](#) and/or initiated if [significant](#) nonconformities suggest a lack of confidence in existing [arrangements](#) – refer to section E.1.6 [Prospect and risk assessment](#). [Corrective action](#) and [preventive action](#) should be taken, [as applicable](#), as per section E.9.2 [Corrective and preventive action](#).

Corrected [structure](#) should be subject to re[verification processes](#), as necessary, to demonstrate [conformity](#) to [requirements](#).

### E.8.2.2. Emergencies, Crises and Disaster Recovery

≤ [Emergencies](#), [crises](#) and [disaster recovery](#) vary in their scale and often occur and [need](#) to be [managed](#) at the same time [requiring](#) response [arrangements](#) to be reactive and flexible. [Managers](#) and [workers](#) are required to [behave](#) differently to normal and to be capable of executing carefully [planned](#) and [tested contingency arrangements](#) in an appropriate way to suit the circumstances. Such situations can place a lot of pressure on staff because of the novel and urgent [aspects](#) of [managing](#) and coping with the situation, which inevitably may cause [stress](#) – see section E.2.4.4.4 [Fitness](#).

[Emergencies](#), [crises](#) and [disaster recovery arrangements](#) have common elements and should ideally not be [defined](#) in isolation of one another. Any interfaces between separate [plans](#) should be identified and harmonised. In addition, the situations requiring that the [plans](#) are engaged and the point that normality can be re-established should be [defined](#).

When [identifying](#) potential [emergency](#), crisis and [disaster recovery](#) situations special attention should be paid to plant start-up and shutdown [conditions](#) and reasonably foreseeable [events](#) requiring [contingency arrangements](#).

Issues may include a [diversity](#) of situations such as small scale spillages of chemicals or [failure](#) of [emission](#) abatement equipment and serious situations [significantly endangering](#) humans, physical and virtual [assets](#) and the [environment](#). The [organisation](#) should be prepared for each type of credible [emergency](#), [crisis](#) or [disaster recover](#) situation.

The severity of the [impact](#) and disruption on an [organisation](#) may vary at different stages of the [event](#). Response arrangements need to be able to adapt during the progress of the [event](#) informed by [monitoring](#) and [review](#) so that [resources](#) are [effectively](#) and [efficiently](#) optimally deployed. This may be aided by using [event classification](#) as an [indicator](#), which may vary across the [organisation](#). This helps to track an [emergency](#), [crisis](#) or [disaster recover](#) across the whole [organisation](#), where required, and direct and redeploy [resources](#) to achieve the greatest benefit. Refer to section E.10.1.3.1 [Event classification](#).

The [organisation](#) should address:

- Effects of natural disasters,
- The nature of on-site [hazards](#), e.g. flammable liquids, storage tanks and compressed gases, and measures to be taken in the [event](#) of spillages or accidental releases,
- The most [likely](#) type and scale of [event](#) needing a [contingency](#) response,
- The most appropriate method(s) for responding to an [emergency](#), [crisis](#) or [disaster recovery](#),
- [Required](#) personnel [resources](#) bearing in mind [resources](#) needed for continuing normal [operations](#) and the [likely](#) logistics and duration of response scenarios,
- Internal and external [communication](#),
- The action(s) [required](#) to minimize damage and other types of loss,
- [Mitigation](#) and response action(s) to be taken for different types of [event](#),
- The [need](#) for [processes](#) for post-[event](#) evaluation to establish and implement [corrective action](#) and [preventive action](#),
- Periodic [testing](#) of [contingency](#) response [procedure\(s\)](#),
- [Training](#) of [contingency](#) response personnel,
- Identification of key personnel and external agencies providing support, including contact details,
- Evacuation routes and assembly points,
- The potential for an [emergency](#) situation(s) or [event](#) at a nearby facility (e.g. plant, road, railway),
- The possibility of mutual assistance from other [organisations](#) and the [need](#) for cooperation and coordination,
- The [need](#) for alternative temporary premises,
- The [need](#) to have [contingency contractual arrangements](#) in place,
- Provision of necessary [training](#) for [event](#) preparedness and response, including, if necessary, for any new measures.

[Organisations](#) should implement appropriate [event](#) preparedness and response [plans](#). They typically but not exhaustively may cover:

- Fire
- Flood
- Severe weather
- First aid
- Loss of [data systems](#)

- General [crisis](#)
- Loss of personnel [availability](#)
- [Supplier](#) interruption
- Loss of financial viability
- Hostile takeover
- Fraud
- Theft
- Criminal or [commercial](#) litigation
- Loss of essential supplies to premises
- Loss of key [customer](#)

### E.8.2.3. Intentionally halted processes

≤ The [organisation](#) should empower personnel directly involved with production [structures](#) and [processes](#) to be able to stop [processes](#) if they believe that personnel, the [environment](#), plant, equipment, [data](#), [commercial](#) obligations or any other [asset](#) could be [significantly endangered](#). The [objective](#) of this is to prevent avoidable loss using the [knowledge](#) and experience of those closest to the [structures](#) and [processes](#) able to exercise preventive [action](#) in the shortest possible time. The [organisation](#) must promote a [just culture](#) so that staff feel confident to take [action](#) without fearing they may be blamed should their judgement turn out to have been flawed.

See also sections E.2.2 [Responsibilities and authorities](#) and E.2.5.3 [Management of conflict](#).

### E.8.2.4. Defect notification and recall

≤ [Organisations](#) should have [contingency arrangements](#) for [communicating](#) with [customers](#) and other relevant [stakeholders](#) in case it is revealed that an internally or externally delivered [good](#) or [service](#) is [significantly](#) defective so that [risk](#) may be controlled and [corrective action](#) or compensatory [action](#) can be executed.

### E.8.2.5. Insurance

≤ The [organisation](#) should [maintain](#) suitable and sufficient insurance to transfer risk, where appropriate, to [mitigate](#) its [risks](#) and to comply with regulations and to meet [customer](#) and other [stakeholder requirements](#). The following are typical types of common insurance:

- Employers liability;
- Public and product liability;
- Buildings, vehicles and other [assets](#).

[Customers](#) or other [stakeholders](#) may require specific levels or [aspects](#) of insurance. There may also be legal [requirements](#) to have insurance in place – refer to section E.1.5 [Legislation and standards](#).

[Projects](#) may require specific types or additional levels of insurance.

### E.8.2.6. Project contingency arrangements

≤ [Projects](#) may make use of the [organisation's](#) general [contingency arrangements](#) where applicable but may require additional [contingency arrangements](#) because of novel [aspects](#) of the [project](#) and specific [customer](#) and [stakeholder requirements](#). See also section E.7.1.5 [Projects](#)

### E.8.3. Contingency arrangements testing

≤ Thorough [testing](#) of [contingency arrangements](#) is critical to their [success](#) when called upon. The reason for this is that [contingency arrangements](#) are by their nature not used regularly, unlike [normal structures](#) and their associated [normal processes](#) that can generally be [observed](#) to be successful.

[Contingency arrangements](#) can also be difficult to [validate](#) because of the difficulty of simulating the [conditions](#) in which they are [required](#) to be initiated. It is often useful to [test](#) the various components of the [arrangements](#) and [test](#) the full [arrangements](#) acting as a whole less frequently because of the large commitment of participating [resources](#) involved which may include the coordination and cooperation of bodies external to the [organisation](#).

[Contingency arrangements testing](#) can often be combined with [contingency arrangements training](#) – refer to section E.8.4 [Contingency arrangements training](#).

### E.8.4. Contingency arrangements training

≤ Dedicated [contingency training](#) is [required](#) because [contingency structures](#) and [processes](#) are generally not part of normal [organisation](#) experience unless perhaps the personnel work directly within [emergency](#) response functions. [Training](#) should attempt to be broad based to cater for the variation in [likely](#) contingencies that may require a response. Personnel require [training](#) so that they can perform their assigned [posts](#) and [roles](#) and also [training](#) collectively to interact [effectively](#) and [efficiently](#) as a team.

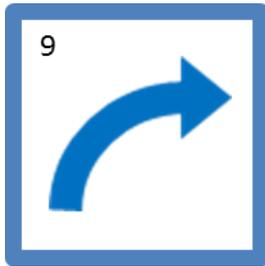
[Contingency arrangements training](#) can often be combined with [contingency arrangements testing](#) – refer to section E.8.3 [Contingency arrangements testing](#).

### E.8.5. Event response

≤ Personnel should be vigilant for situations constituting or potentially developing into [significant](#) or major [events](#) and alert personnel empowered to implement response [plans](#). The response [management structures](#) including control centres should be established without delay and the response [processes](#) initiated. The progress and [performance](#) of [plans](#) should be [continually monitored](#) and [reviewed](#) and if necessary [plans](#) should be modified to achieve its [objective](#). Personnel should comply with published [plans](#) and directions unless officially changed by those [managing](#) the response.

The detail and timing of [observations](#), [communications](#) and [actions](#) etc. should be [recorded](#) to allow [events](#) to be [investigated](#) as per section E.10.1.1 [Evidence preservation](#).

## E.9. Change



≤ Change embraces all types of [significant](#) permanent or temporary change within the [organisation](#), and the environment under its control or able to influence, e.g.; [corrective action](#), [strategic](#) or [tactical](#) change, [structural](#) change or experiment and change of the [management system](#). Change [management](#) should be directed to improve the [effectiveness](#) and [efficiency](#) of the [organisation](#) so that it [equitably](#) meets its [stakeholder's needs](#) and [expectations](#) while making the best use of [resources](#). Change [management](#) should be [systematic](#) and ensure that ill-conceived change proposals are detected and rejected.

[Plan-Do-Check-Act](#) is the basis of the cyclic [process](#) of learning and failing to retain its [effectiveness](#) results in an [organisation](#) losing its [knowledge](#) and [competence](#). Change [processes](#) should be directed to ensure that the [organisation's structures](#) and [processes](#) deliver [value](#) continuously, [continually](#) or potentially via [contingency arrangements](#), [as applicable](#). [Value](#) should be optimised as [equitably](#) perceived by the [stakeholders](#) making the best use of [resources](#). [Redundant](#) non-[value](#) adding elements should be removed where [commercially](#) viable.

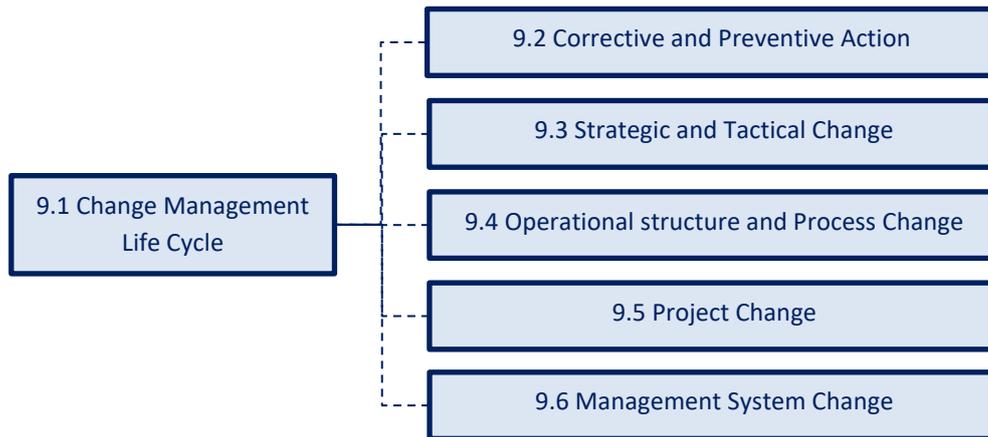
The improvement of structures and processes may be aided by the use of appropriate management tools and techniques – refer to section E.1.8 [Management tools and techniques](#).

Change may be initiated from inside or outside of the [organisation reactively](#) or [proactively](#) – refer to sections 0 [Reactive investigation – Events](#), 0 [Planned monitoring](#) and 0 [Review and Action](#).

[Managing](#) change may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Failure Prevention Analysis](#)
- ❖ [Force Field Analysis](#)
- ❖ [Hierarchical Task Analysis](#)
- ❖ [Infrastructure Tour](#)
- ❖ [Interviews](#)
- ❖ [Line Graph](#)
- ❖ [Prospect and/or Risk Register/Database](#)
- ❖ [RAG Status Reports](#)
- ❖ [Surveys](#)
- ❖ [Tables](#)
- ❖ [Tree Diagram](#)
- ❖ [Value Analysis](#)

See also section E.1.6.1 [Prospect and risk assessment planning](#).



**Figure 23: Change Subsections**

### E.9.1. Change management life cycle

< An [organisation](#) needs to [track](#) the progress of all types of permanent and temporary change to demonstrate [effective management control](#) to avoid implementing ill-conceived modifications and experiments.

Change proposals and their implementation should be [classified](#) according to their potential to [impact performance](#) so that an appropriate level of [management control](#) is applied to maximise potential [opportunities](#) and avoid or control [risk](#) – refer to [Appendix 2: Classification of Structures and Processes Example](#).

Any [significant](#) change should be [managed](#) as a [project](#) from inception to completion as per section E.7.1.5 [Projects](#).

The life cycle of a change will typically include:

- Receipt of change proposal,
- Proposal [prospect and risk classification](#),
- Proposal initial appraisal,
- Proposal initial acceptance or rejection,
- Assignment of [reviewer/review](#) team,
- Detailed [prospect and risk analysis](#) and appraisal including [cost benefit analysis](#),
- Reporting of proposal appraisal,
- Independent [peer review](#) (as applicable to the [classification](#)),
- Report and [peer review](#) acceptance or rejection, conclusion and recommendation,
- [Management](#) approval to proceed with implementation,
- Development of change implementation [plan](#) ([project plan](#)),
- Acceptance and approval of change implementation [plan](#),
- Establishment of change implementation [project organisation](#),
- Change implementation,
- Change implementation evaluation, [review](#) and [action](#).
- Post change implementation [monitoring](#).

### E.9.2. Corrective and preventive action

< [Corrective action](#) and [preventive action](#) involve change addressing the [immediate causes](#) and the [root causes](#) of problems. People should be engaged [creatively](#) in the resolution of both types of [action](#).

[Corrective action](#) is [reactive](#) in nature rectifying a revealed [nonconformity](#) while [preventive action](#) is [proactive](#) based on or informed by [risk data](#). [Corrective action](#) is about attempting to rectify what has happened in the past while [preventive action](#) is about preventing what could potentially happen in the future. The PDCA [structure](#) of this [MSS](#) embodies [corrective action](#) and preventive [management processes](#) and may be conducted together, where appropriate – refer to section A.1.2 [Plan-Do-Check-Act](#).

The [need](#) for [corrective action](#) is primarily identified during the various forms of [planned monitoring](#) ranging from formal [audits](#) down to less formal self-[monitoring](#) based on individual vigilance – refer to Figure 27: Planned Monitoring Example and 0 [Planned monitoring](#). [Action](#) is agreed to correct nonconformities or other undesirable situations via [review](#) and [action processes](#) – refer to section 0 [Review and Action](#).

The [need](#) for [preventive action](#) is identified during [prospect and risk assessments](#), [event investigations](#), [planned monitoring](#), and [management review processes](#) – refer to sections E.1.6 [Prospect and risk assessment](#), E.10.1.3 [Investigation and analysis of root causes](#), 0 [Planned monitoring](#) and 0 [Review and Action](#). [Prospect and risk assessment processes](#) are used to [identify prospects and risks](#), and assign [prospect and risk controls](#) to prevent undesired [events](#) – refer to section E.1.6 [Prospect and risk assessment](#). [Prospect and risk controls](#) in subsequent sections of this [MSS](#) cover the implementation of [prospect and risk controls](#) and good practices helping to encourage desired [events](#) and prevent undesired [events](#). When [events](#) occur and the [root causes](#) are [determined](#) which may reveal the [need](#) to [review](#) the validity of [prospect and risk assessments](#) in the light of the new [data](#) and revise them or [create](#) additional assessments – refer to section E.10.1.3 [Investigation and analysis of root causes](#). The [analysis](#) of [planned monitoring](#) may provide information on trends indicating the [need](#) for [action](#) to prevent the reoccurrence of a [nonconformity](#) or occurrence of similar nonconformities – refer to sections 0 [Planned monitoring](#) and 0 [Review and Action](#).

Information on the results of any corrective or preventive [action](#) should include information on the [review](#) of the [effectiveness](#) of these [actions](#).

### E.9.3. Strategic and tactical change

< Top-level [strategic](#) change may have implications throughout the [organisation](#) and externally and are normally given a high [classification](#). [Strategic](#) change proposals should be appropriately [prospect and risk assessed](#) so that the [impact](#) on the overall functionality of the [organisation](#) are fully understood and considered.

[Tactical](#) change should be similarly [managed](#) and care taken to ensure the change is still compliant with the [strategic plan](#) and [policy statement](#) to ensure [management](#) is vertically integrated.

### E.9.4. Operational structure and process change

< [Organisations](#) should establish [systems](#) for encouraging [stakeholders](#) to participate in all types of improvement. Staff making suggestions should be treated with respect and provided with feedback

on the proposal including an explanation the reason when it is not accepted – see section E.11.7 [Self-monitoring and vigilance](#).

[Significant](#) change needs to be [managed](#) as a [project](#) that has the full commitment of [top management](#). It should be well [planned](#) and where appropriate subdivided into conveniently [managed](#) sub[projects](#) – refer to section E.7.1.5 [Projects](#).

Relevant [stakeholders](#) should be appropriately involved in the change [process](#) and [expert](#) advice sought as necessary.

### **E.9.5. Project change**

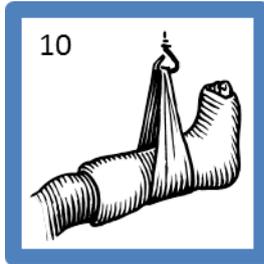
< [Projects](#) are used to implement agreed internal and external changes. [Significant](#) change within the [project](#) should be [managed](#) like any other type of change – refer to section E.9.1 [Change management lifecycle](#).

[Project](#) progress should be [monitored](#) and reported against [defined success criteria](#) to ensure that problems are identified as early as possible and [action](#) taken – refer to section E.7.1.5 [Projects](#).

### **E.9.6. Management system change**

< The [management system](#) is used to direct and guide the [organisation's](#) and [project's processes](#) and it is therefore critically important that any change to the [management system](#) whether permanent or temporary is very carefully controlled – refer to section E.4.2 [Control](#).

## E.10. Reactive Investigation



< [Reactive investigation](#) is principally used following an [event](#) such as an accident, undesired [event](#) or [near miss](#), resulting from one or more [failures](#) in the [organisation's management system](#), [organisation culture](#), [knowledge base](#) or [corporate leadership](#). Positive outcome [events](#) such as a congratulating letter from a [customer](#) should also be included in [reactive investigation](#) because it may be helpful in achieving improvement, is a valuable source of [data](#) in [marketing](#), and [communicating](#) positive feedback helps reinforce good practices and raise staff moral and motivation.

[Events](#) may come to the attention of an [organisation](#) through internal or external reporting [processes](#) or [planned monitoring](#) – refer to section 0 [Planned monitoring](#). [Reactive investigation](#) complements [planned monitoring](#) covered in section 0 [Planned Monitoring](#) and neither is meant to be a substitute for the other.

Potential improvement may result from the [reactive investigation](#) of anything that occurs unexpectedly but it makes sense to filter [events](#) to ensure that [management resources](#) are focused where the return on expenditure of effort is maximised. [Events](#) may usefully be [classified](#) according to potential to cause loss – refer to section E.10.1.3 [Investigation and analysis of root causes](#).

[Reactive investigation](#) of an [event](#) is different to a [contingency process](#), which may include [emergency](#) and [crisis](#) response covered in section 0 [Contingencies](#). [Reactive investigation processes](#) normally follow conduct of [contingency processes](#) but may overlap.

[Reactive investigation](#) should, [as appropriate](#), contribute to the generation of [indicators](#) as per section E.4.3.2 [Indicators](#).

[Planned monitoring](#) facilitates improvement by feeding into [review](#) and [action](#) covered in section 0 [Review and Action](#).

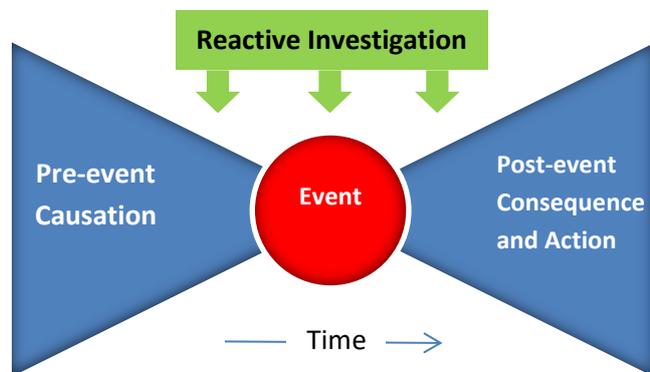
[Reactive investigation](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Concentration diagrams](#)
- ❖ [Control charts](#)
- ❖ [Data handling and display](#)
- ❖ [Failure mode and effects analysis](#)
- ❖ [Hierarchical task analysis](#)
- ❖ [Infrastructure tour](#)
- ❖ [Interviews](#)
- ❖ [Line graph](#)
- ❖ [Matrix data analysis chart](#)
- ❖ [Matrix diagram](#)
- ❖ [Nominal group technique](#)
- ❖ [Pareto analysis](#)
- ❖ [Pareto charts](#)
- ❖ [Performance indicators](#)
- ❖ [Process capability](#)

- ❖ [Process flow charts](#)
- ❖ [Prospect and/or risk register/database](#)
- ❖ [Radar chart](#)
- ❖ [Rag status reports](#)
- ❖ [Relations diagram](#)
- ❖ [Root cause analysis](#)
- ❖ [Stress testing](#)
- ❖ [Surveys](#)
- ❖ [Tables](#)
- ❖ [Tree diagram](#)
- ❖ [Why – why diagrams](#)

### Investigation process

[Reactive investigation](#) is shown diagrammatically in Figure 24: Reactive Investigation. It covers internal and external negative and positive consequence [events](#) such as accidents, undesired [events](#), occurrences and [near misses](#) including [customer](#) complaints and positive feedbacks. Internal and external [events](#) are of interest to an [organisation](#) as both may contribute to learning lessons and making improvements. [Reactive investigation](#) also



**Figure 24: Reactive Investigation**

covers things that may be deemed to be positive e.g., a novel [event](#) that may present a [prospect](#) for the [organisation](#) to exploit. Another example would be [observed](#) positive [data](#) e.g. beneficial trend in the [market](#) or the economy needing to be fed into [marketing](#) – refer to section E.3.2 [Marketing](#). See also [Appendix 4: Bowtie](#).

### Direct and root causes

[Reactive investigation processes](#) should be [designed](#) to:

- Establish the circumstances leading up to, during, and after the [event](#),
- [Identify](#) whether existing [management arrangements](#) were or are adequate,
- Provide suitable [records](#) of the [event](#) for comparison with past and future [events](#),
- Comply with regulatory and corporate reporting [requirements](#).

Accidents, undesired [events](#) and [near misses](#) should be [analysed](#) to [determine](#) the direct and [root causes](#). [Corrective action](#) should then be taken to fix the direct cause of the undesired [event](#) and where applicable broader weaknesses in the [management arrangements](#) such as [communication](#), [training](#), [documentation](#), [risk](#) assessment etc. Multiple [event investigation data](#) and conclusions can be used to [review risk assessments](#).

### Near miss events

[Near miss events](#) have the advantage over accident or [events](#) because of their more frequent occurrence creating the potential for providing large amounts of very valuable data for the

[organisation](#) to learn from. Research shows that for major or over 3 days absent from work accident injuries there are 7 minor injuries and 189 [near misses](#). [Near misses](#) represent [failures](#) in the same or similar [prospect and risk controls](#) – it is just fortuitous that a [near miss](#) is not an injury. Although [near miss](#) reporting is normally associated with [safety](#) it is just [as applicable](#) and valuable to any other [aspect](#) of [management](#) such as [goods](#) and [services quality failures](#) causing upset to [customers](#).

For personnel to freely report [near misses](#) the [organisation](#) must promote a ‘[just culture](#)’, sometimes incorrectly termed a ‘blame free [organisation culture](#)’ – refer to section E.1.3 [Policy statement](#). It should be noted that the number of [near misses](#) reported will not necessarily correlate with a particular [aspect](#) of [performance](#) e.g. when initially introducing a [near miss](#) reporting [initiative](#) the frequency of reporting would be expected to rise before plateauing irrespective of actual [performance](#). [Near miss](#) reporting may also fall off due to staff apathy, work pressures, attention drawn to other things or due to deteriorating trust.

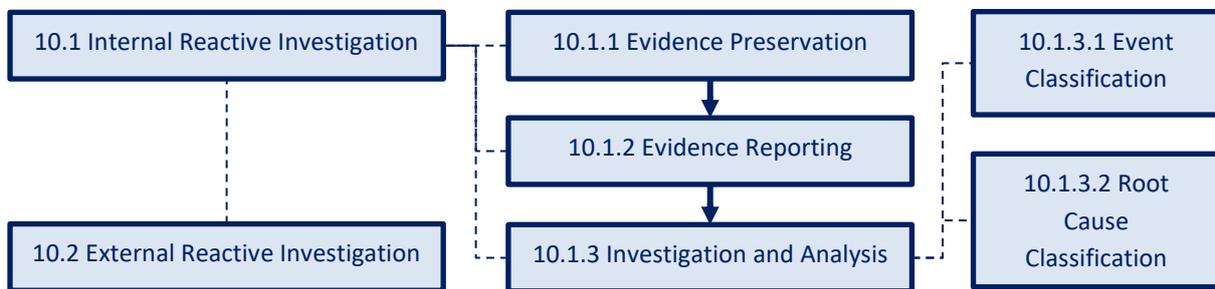


Figure 25: Reactive Investigation Subsections

## E.10.1. Internal reactive investigation

≤ Internal [reactive investigation](#) covers:

- Preservation and collecting of evidence,
- Recording of key details,
- [Analysis](#) to [determine](#) the [immediate causes](#) of the [event](#),
- [Analysis](#) to [determine](#) the [root causes](#) of the [event](#),
- [Performance](#) of appropriate [corrective action](#) and [preventive action](#),
- Briefing of lessons to be learnt from internal and external [events](#) to help prevent their re-occurrence,
- Reporting of [significant events](#) to relevant [stakeholders](#).

### E.10.1.1. Evidence preservation

≤ First priority should be given to the preservation of life, the [safety](#) of personnel, protection of the [environment](#) and preventing loss of valuable [assets](#) – refer to section 0 [Contingencies](#).

The [organisation](#) should then take steps to preserve and [record](#) evidence relating to the [event](#). This may include setting up physical barriers to prevent [unauthorized](#) entry to the [event](#) location or [systems](#). Cameras may be used to [record](#) evidence without disturbing the scene.

### E.10.1.2. Evidence reporting

≤ [Environmental](#) undesired [events](#) must be reported as soon as possible to the relevant government agency, facility owners and [structure and process owners](#) to allow them to take their own [contingency](#)

[actions](#) to [mitigate](#) the [impact](#) of the [event](#) e.g. a release of [pollution](#) to the atmosphere or a watercourse. The [event](#) may have wider unforeseen [impacts](#) on the functionality of [systems](#) needing [contingency arrangements](#) to be implemented – refer to section 0 [Contingencies](#)

### **E.10.1.3. Investigation and analysis of root causes**

≤ Appropriate use should be made of [Root Cause Analysis](#) covered in [Appendix 4: Management Tools and Techniques](#).

Identification of [immediate causes](#) and [root causes](#) facilitates [corrective action](#) and [preventive action](#) to improve [structures](#) and [processes](#) that deliver the various [aspects](#) of performance. Improvement resulting from [immediate causes](#) may be more localised while improvements from [root causes](#) may be far reaching especially where generic [structures](#) and [processes](#) can be improved e.g. [training](#) or [communication structures](#) and/or [processes](#).

The output of the [event](#) report should clearly [communicate](#) the [required corrective action](#) and [preventive action](#) and their scope of application – refer to section E.9.2 [Corrective and preventive action](#).

#### **E.10.1.3.1. Event classification**

≤ The [event classification](#) definitions should ideally be aligned with the [structure](#) and [process classification](#) definitions – refer to section E.1.6.2 [Classification of structures and processes](#) and [Appendix 2: Classification of Structures and Processes Example](#).

The rigor that [events](#) are investigated may be linked to the [event classification](#) definitions. However, an [event](#) with a low [classification](#) may elicit [root causes](#) that have implications for other higher [classified structures](#) and [processes](#) that are apparently independent of the [event](#).

[Event classification](#) may also be used to aid the [management](#) of [emergencies](#), [crises](#) and [disaster recovery](#) - refer to section E.8.2.2 [Emergencies, Crises and Disaster Recovery](#).

#### **E.10.1.3.2. Root cause classification**

≤ [Root causes](#) can be [classified](#) according to their perceived importance to facilitate prioritization of [management action](#).

The [processes](#) of [corrective action](#) and [preventive action](#) become simpler when the [root cause classification structure](#) aligns with the [structure](#) of the [organisation's](#) formal [management system](#). A twelve-element [taxonomy](#) example is described in section A.1.3 [Universal PDCA Twelve Element Structure](#).

## **E.10.2. External reactive investigation**

≤ Many [events](#) occur outside of the [organisation](#) that it can learn from and feed into its [continual](#) improvement [processes](#). [Event data](#) may be officially [communicated](#) to the [organisation](#) by a [stakeholder](#) following its own internal [reactive investigation processes](#) or otherwise be generally [communicated](#) e.g. a report in the journal of an official body etc.

The [organisation](#) should assign [roles](#) and [responsibilities](#) to ensure that potentially valuable external [event data](#) is collected, appropriately filtered, [analysed](#), lessons identified and appropriately [communicated](#) and improvement changes initiated via [review](#) and [action](#).

## E.11. Planned Monitoring



≤ Internal and external [planned monitoring](#) generally comprises [audits](#), [inspection](#), surveys and [benchmarking](#) etc. and provides information on weaknesses within the [organisation's management system](#) and its [strategic](#), [tactical](#) and [operational structures](#) and [processes](#) enabling [corrective action](#) and [preventive action](#) to be performed.

[Planned monitoring](#) is an essential element of the [management system](#) and together with [reactive investigation](#) forms the 'check' part of the [Plan-Do-Check-Act management cycle](#) – refer to Figure 4: Universal Plan-Do-Check-Act Twelve Element Structure.

It is essential to ascertain whether the [management system](#) is being followed in all respects, and if not the reason why. [Planned monitoring](#) ensures that [structures](#) and [processes](#):

- Conform with approved formal [management requirements](#),
- Conform with relevant standards and legislation,
- Conform with [customer](#) and other relevant [stakeholder requirements](#),
- Are [effective](#) and [efficient](#) and [opportunities](#) for improvement are identified,
- Lead to [customer](#) and other [stakeholder](#) satisfaction.

[Planned monitoring](#) is used to [identify](#) deficiencies in the [organisation](#) for subsequent remedial [action](#) and to prevent future problems and can be applied internally within the [organisation](#) and externally within its supply and [delivery chains](#), [as appropriate](#). They should form a hierarchy of [monitoring](#) measures and should take account of [prospect and risk assessments](#), past [monitored performance](#) and [reactive investigations](#) – refer to section 0 [Reactive Investigation](#).

The [observations](#) made during [planned monitoring processes](#) help improve the [management system](#) via [review](#) and [action](#) covered in section 0 [Review and Action](#). However, it is impractical for [planned monitoring](#) to cover everything and pragmatism requires that [structures](#) and [processes](#) have inevitably to be sampled informed by past [planned monitoring findings](#), [reactive investigations](#) and [prospect and risk assessments](#).

### Non-uniformity of organisation performance

Major [events](#) are usually high in consequence but low in frequency. This means that [reactive event investigation](#) provides insufficient [data](#) to reliably assess an [organisation's performance](#) or to detect its possible decline towards becoming seriously dysfunctional. It is therefore critically important that [planned monitoring](#) is used to understand and assess an [organisation's performance](#) and whether the contributing [aspects](#) are improving, steady or deteriorating, rather than just waiting for a major [event](#) that may cause widespread [harm](#) and/or bankrupt the [organisation](#) and seriously [impact](#) its [stakeholders](#). The selection and use of [performance indicators](#) as a whole should also take account of this critically important issue – refer to section E.4.3.2 [Indicators](#).

It should be noted that the [performance](#) of an [organisation](#) is not homogeneous and strengths and weaknesses may coexist in close proximity. [Performance](#) is multi-dimensional – some [performance](#) drivers may be improving, while others may be steady or deteriorating. Common drivers contribute to the multiple facets of an [organisation's performance](#) but there is still the potential for [significant](#) difference in the facets of [performance](#) e.g. good [commercial performance](#) does not indicate good

[safety performance](#). [Risks](#) associated with different facets of [performance](#) behave differently even though there may be a degree of coupling between them. An [aspect](#) of the [management system](#) e.g. '[competence](#)' may not be complied with uniformly across the different facets of [performance](#) and the context of application can vary in complexity, [risk](#) and the degree that it is novel to the [organisation](#). An [integrated management system](#) has many advantages but it cannot automatically deliver uniform [performance](#).

### Latent effects

Many [infrastructure risks](#) are due to historical [human errors](#) and are [unlikely](#) to be detected by [performance indicators](#) or standard [monitoring](#) methods. Latent [human error](#) potentially occurs throughout the whole [infrastructure life cycle](#) from [design](#) to decommissioning, and often spans a succession of [management](#) administrations. Improving the current [organisation](#) personnel [performance](#) may have negligible effect on historical latent [human errors](#) that [determined](#) the current plant [design](#) and residual [risks](#).

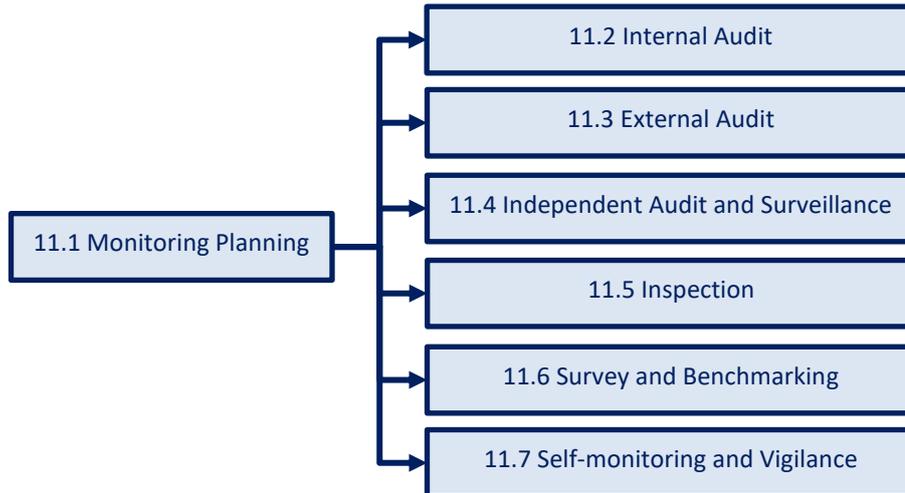
### Proportionate monitoring

[Planned monitoring](#) should match the complexity of the multiple facets of the [organisation's performance](#) and be experience informed, [Prospect and/or risk informed](#), [as applicable](#). It should be informed by the criticality of [prospect and risk controls](#) i.e. the decreased [prospect](#) or increased [risk](#) if a [prospect and/or risk control](#) is not [effectively](#) implemented or fails. This can be facilitated [systematically](#) by [classifying structures](#) and [processes](#) according to their potential to [impact](#) the [organisation's performance](#) – refer to section E.1.6.1 [Prospect and risk assessment planning](#) and [Appendix 2: Classification of Structures and Processes Example](#) and [Appendix 3: Prospect and Risk Rating System Example](#).

Overall [management](#) attention should be appropriately wide focused, [risk informed](#), experience informed, detailed and constantly vigilant. Apparent good [organisation performance](#) demonstrated by [key performance indicators](#) may lead to complacency – [monitoring](#) has limitations especially in respect to low frequency major [threats](#) and must not be a substitute for overall good [management](#).

### Indicators

[Planned monitoring](#) should, [as appropriate](#), contribute to the generation of [indicators](#) as per section E.4.3.2 [Indicators](#).



**Figure 26: Planned Monitoring Subsections**

### E.11.1. Monitoring planning

≤ The goal of [monitoring planning](#) is to achieve the maximum [value](#) from the [monitoring resource](#) expended and use [diverse](#) methods to deliver [synergistic](#) benefits. This may be achieved through the dynamic [planning](#) of [planned monitoring](#) which should be [evidence informed](#) from past [reactive](#) and [planned monitoring](#) and [prospect and/or risk informed](#) – refer to controls criticality in [Appendix 3.4 Prospect and risk register structure](#).

[Monitoring planning](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Check sheets](#)
- ❖ [Data handling and display](#)
- ❖ [Focus groups](#)
- ❖ [Gap analysis](#)
- ❖ [Hierarchical task analysis](#)
- ❖ [Performance indicators](#)
- ❖ [Prospect and/or risk register/database](#)
- ❖ [Radar chart](#)
- ❖ [Rag status reports](#)
- ❖ [Surveys](#)
- ❖ [Tables](#)
- ❖ [Tree diagram](#)

### Monitoring diversity

A [diversity](#) of [monitoring](#) approaches including [organisation](#) based and [process](#) based [audits](#) can add [value](#) by using [management resources](#) more [effectively](#) and [efficiently](#) aligned to the scope of what is being [monitoring](#).

### Scoring systems

Scoring [systems](#) may be employed to help [communicate performance](#), aid comparison and judge improvement or deterioration. It should ideally be unified for simplicity of [communication](#) and understanding – refer to section A.5.1 [Compliance scoring system](#).

### Planned monitoring personnel

Involving all managers in [monitoring](#) helps them to keep in touch with [structures](#) and [processes](#) and the [workplace environment](#) and [organisation culture](#), as well as being seen to be committed and involved by the workforce.

All [aspects](#) of [monitoring](#) may be conducted using [employees](#) or [contracted](#) personnel. [Contracted](#) personnel may be used to supplement the [organisation’s resources](#) and also to provide particular [expertise](#) and independence.

[Audits](#) should be led by [competent](#) lead auditors and [audit](#) teams should include [competences](#) matching the scope of the [audit](#).

### Integrated planned monitoring

The [effectiveness](#) and [efficiency](#) of [planned monitoring](#) can be enhanced by focusing [planned monitoring](#) on the [organisation](#) or [project structures](#) and [processes](#) rather than specific facets of [performance](#).

[Audits](#) and [inspections](#) should generally be focused on the functionality and total [performance](#) of [structures](#) and [processes](#) although this will depend on the [availability](#) of [competent](#) auditors and inspectors.



**Figure 27: Planned Monitoring Example**

Supplementary [audits](#), [reviews](#) and [inspections](#) can also be conducted to focus on specific issues. These may follow a [significant event](#) or other hot topic confronting the organisation and possibly of concern to [stakeholders](#).

### Dynamic planning

Different types of [planned monitoring](#) should be [coordinated](#) and conducted at an appropriate frequency and formality and form a multi-layered hierarchy as shown in Figure 27: Planned Monitoring Example. In general, the conduct of [planned monitoring](#) is more formal towards the top of the hierarchy requiring a higher level of [competence](#) to coordinate and execute and the frequency of conducting the [monitoring](#) increases towards the bottom of the hierarchy with self-[monitoring](#) being ideally [continual](#). Each type of [monitoring](#) should check that subordinate types of [monitoring](#) are operating [effectively](#).

The targeting and frequency of [planned monitoring](#) can be adjusted over time to ensure the most value is obtained for the [resource](#) expended. This should ideally include [prospect and/or risk informed monitoring](#) which takes account of the criticality of [prospect and/or risk controls](#) – refer to section E.1.6.5 [Prospect and risk improvement](#). Adjustments to the [planned monitoring arrangements](#) should be agreed and approved as part of [management review](#) and [action](#) – refer to section 0 [Review and Action](#).

The different types of [planned monitoring](#) are complementary and should not be substituted for each other. Collectively they can be much more beneficial than the sum of their individual benefits delivering [synergistic](#) added [value](#).

### E.11.2. Internal audit

[Internal audits](#) are conducted by the [organisation](#) to provide confidence that its [management system](#) complies with the designated standards, has been [effectively](#) implemented and is being complied with.

The [management](#) and conduct of [internal audits](#) should abide by the [principles](#) of [integrity](#), respect, [confidentiality](#), objectivity, independence and an evidence-based approach.

Auditors should be independent of the activity being audited, wherever [practicable](#), and should in all cases act in a manner that is free from bias and conflict of interest. Auditors may perform the [role](#) on a part time basis.

Individuals who are involved in [managing](#) the [internal audit program](#), and [planning](#) or conducting [internal audits](#) should demonstrate [competence](#). This should be evaluated through a [process](#) that considers personal [behaviour](#) and the ability to apply the [knowledge](#) and skills gained through [education](#), work experience, auditor [training](#) and [audit](#) experience.

When establishing an [internal audit program](#), including [audit objectives](#), scope and frequency, an [organisation](#) should take into account of the:

- Size and nature of the [organisation](#) being audited,
- Complexity and maturity of the [management system](#),
- [Organisation's aspects](#),
- [Organisation's prospects](#) and [risks](#),
- [Management](#) priorities and other business considerations,
- Legislation and adopted standards obligations,
- [Management system requirements](#),
- Results of [planned monitoring](#),
- Previous [events](#) investigations and [root causes](#),
- Results of previous [audits](#) (whether internal or undertaken by external parties).

The results of the [internal audit program](#) should address the [performance](#) of the [management system](#) with respect to the achievement of [objectives](#) and fulfilment of compliance with legislation and adopted standards.

### E.11.3. External audit

< [External audits \(second party\)](#) are conducted by the [organisation](#) on critical [suppliers](#) or potential [suppliers](#), where necessary, to provide additional confidence that the [supplier organisation](#) is complying with [defined arrangements](#) within the scope of the [external audit \(second party\)](#) – refer to section E.6.4 [Performance evaluation](#). An [external audit \(second party\)](#) provides the [opportunity](#) to [observe](#) and assess how [structures](#) and [processes](#) will deliver [contracted goods](#) and [services](#) – refer to section E.3.3 [Contracts](#).

An external auditor may perform the [role](#) on a part time basis.

### E.11.4. Independent audit and surveillance

< [Independent audits \(third party\)](#) are conducted on the [organisation](#) by external [stakeholders](#) to confirm the adequacy, implementation and compliance of [defined arrangements](#). [Independent audits \(third party\)](#) may be conducted to support [certification](#) of the [organisation's management system](#).

[Independent audits \(third party\)](#) are potentially valuable to an [organisation](#) because of their independent objectivity. Auditees should exploit [independent audit \(third party\) processes](#) as a means to stimulate [continual](#) improvement thinking and the seeking of [opportunities](#) to improve the [organisation's structures](#) and [processes](#).

### E.11.5. Inspection

< [Inspections](#) are used to [observe structures](#) and [processes](#) within the [workplace](#) to [identify hazardous conditions](#) or defective [structures](#) or practices needing remedial [action](#). They may be carried out by [workers](#), first line or more senior managers usually by referring to and completing a [structured checklist](#).

[Inspections](#) complement [audits](#) and are normally conducted at a higher frequency. [inspections](#) may be performed periodically on a regular basis but additionally may be performed when a particular [need](#) has been identified such as during a [review process](#) as per section 0 [Review and Action](#).

[Inspections](#) may be carried out on people, [infrastructure](#), materials, [goods](#), [data](#) and [suppliers](#). [Inspections](#) on people may include routine, unannounced and 'for cause' drug and alcohol [testing](#) compliant with the [organisation's policy](#) covered in section E.1.3 [Policy statement](#). [Inspections](#) of people should align with the [policy statement](#) and [contract](#) of employment – refer to sections E.1.3 [Policy statement](#) and E.2.4 [Employment life cycle](#).

[Inspections](#) may be used to [verify](#) a variety of [conditions](#) and parameters and also provide [performance data](#) – refer to section C.4.3.2 [Indicators](#). [Data](#) may be [analysed](#) statistically as per section E.4.3 [Data processing](#) and also used to [statistically control processes](#) – refer to section E.7.1 [Structure and process design](#).

[Inspections](#) may be performed concurrently with other [management](#) activities by a variety of managers and other personnel.

### E.11.6. Survey and benchmarking

≤ Surveys and [benchmarking](#) may be conducted within and outside of the [organisation](#) on a range of topics such as [customer](#) satisfaction, [organisation culture](#) etc.

Each [organisation](#) needs to take an appropriate approach to elicit feedback [data](#) from customers and other [stakeholders](#) on a regular basis to ensure that confidence is retained that the [organisation](#) is aligned with the [needs](#) and [expectations](#) of its [stakeholders](#). A [project](#) based [organisation](#) may typically issue a survey [form](#) following completion of each [significant project](#) or sequence of minor [projects](#). A survey [form](#) may be issued directly to the [customer](#) or completed during a face-to-face or telephone interview. Survey [forms](#) should be concise, simple and provide useful [indicator data required](#) for section C.4.3.2 [Indicators](#).

Additional focused surveys may be identified during [management reviews](#) as per section 0 [Review and Action](#).

[Benchmarking](#) surveys may also be conducted by partnering with another [organisation](#) of a similar or unrelated type but sharing some [aspect](#) of functionality where a good practice can potentially be used to improve the [organisation](#).

### E.11.7. Self-monitoring and vigilance

≤ Self-monitoring and vigilance [processes](#) should be conducted by all personnel as part of their normal [duties](#) as per section E.2.2 [Responsibilities and authorities](#). See also section E.9.4 [Operational structure and process change](#). Self-[monitoring](#) is the critically important front line eyes and ears of the [organisation](#). It not only needs to be fully [effective](#) in [monitoring](#) task level [structures processes](#) in real time, but also to [observe](#) that any [aspect](#) of the [organisation's](#) functionality and its interface with the external [environment](#) is adding [value](#) and not negatively [impacting](#) the [needs](#) and [expectations](#) of the [organisation's](#) stakeholders. It should also be constantly observing that the best use of [resources](#) is being made.

## E.12. Review and Action



≤ The [objective](#) of [review](#) and [action processes](#) is to appraise and judge the functionality and [performance](#) of the [organisation](#), its [management](#) and the various elements of the [management system](#) individually and as a whole. Additionally it agrees [actions](#) to ensure that the [organisation](#) stays aligned with its [stakeholder's needs](#) and [expectations](#), fulfils its [strategic plan](#) and [objectives](#), makes the best use of [resources](#) and [continually](#) improves.

[Review](#) and action forms the final element of [Plan-Do-Check-Act management](#) cycles as described in section A.1.2 [Plan-Do-Check-Act](#) and facilitates [continual](#) learning, [continual](#) improvement and [continual](#) realignment with [stakeholder](#) expectations by creating a closed loop of [management control](#). It must attempt to objectively take account of all [available data](#) giving due weight to evidence and resist making decisions based on a reaction to a single [event](#) which may not be statistically [significant](#).

[Review](#) and [action processes](#) need to be carefully [coordinated](#), [structured](#) and disciplined to ensure that they are [effective](#) and [efficient](#) in an attempt to make the [performance](#) of [management review](#) and [action processes](#) optimal.

[Review](#) and [action](#) covers the [systematic review](#) of all [aspects](#) of the [organisation's](#), management's and the [management system's performance](#) as well as internal and external change. It [reactively](#) looks back on past [performance](#) and also [proactively](#) forward trying to anticipate the future and ensure that the [organisation's operations](#) remain [equitably](#) aligned with the [needs](#) and [expectations](#) of the [stakeholders](#) while making the best use of [resources](#). This involves anticipating change in [stakeholder requirements](#) and [behaviours](#) such as trends in markets, competitor [behaviours](#), [structural](#) and [process innovation](#) and proposed new legislation.

[Review](#) and [action processes](#) are normally conducted within a hierarchy of meetings and pre-meeting activities conducted at differing frequencies. Each element in the hierarchy should take account of the needs of other elements and the whole should feed into a [top management review](#) and [action process](#).

Good [data management](#) can help with the scheduling, [tracking](#), [communication](#) and [transparency](#) of [review](#) and [action processes](#) – refer to section E.4.2.1 [Databases](#).

[Review](#) and [action processes](#) may be aided by the application of specific [management tools](#) and techniques – refer to section E.1.8 [Management tools and techniques](#). These may typically include:

- ❖ [Gap analysis](#)
- ❖ [How-how diagrams](#)
- ❖ [Performance indicators](#)
- ❖ [Profile graphs](#)
- ❖ [Prospect and/or risk register/database](#)
- ❖ [Radar chart](#)
- ❖ [Rag status reports](#)
- ❖ [Ranking and rating](#)
- ❖ [Relations diagram](#)
- ❖ [Strengths weaknesses, opportunities and threats analysis](#)
- ❖ [Tables](#)

- ❖ [Tree diagram](#)
- ❖ [Utility theory](#)
- ❖ [Value analysis](#)

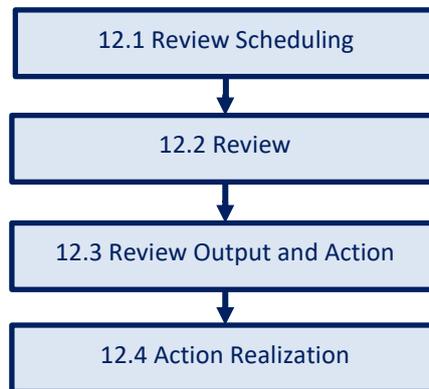


Figure 28: Review and Action Subsections

### E.12.1. Review scheduling

≤ The [organisation](#) should periodically [review](#) and report on all [significant management arrangements](#) according to [defined arrangements](#) – refer to sections E.1.1 [Foundation planning](#) and E.2.5.2 [Communication, consultation, participation and reporting](#). [Review](#) and its reporting should cover the [performance](#) of:

- The [management system](#),
- Compliance with legislation,
- Alliance with [stakeholder needs](#) and [expectations](#),
- Personnel,
- [Commerce](#),
- [Data](#),
- Matter and energy,
- [Suppliers](#),
- [Normal structures](#) and associated [normal processes](#) fulfilling the [purpose](#) of the [organisation](#),
- [Contingency structures](#) and [processes](#),
- Change [initiatives](#),
- [Reactive investigation](#),
- [Planned monitoring](#).

It is normally sufficient to only subject higher level [management system documents](#) to periodic [review](#). Lower level [documents review](#) is normally triggered when changes occur to [processes](#) or the [requirements](#) of the [process](#).

Summaries of [performance](#) under suitable subjects should be prepared to feed into [management review](#) and [action](#) meetings.

The [need](#) for a [coordinated](#) hierarchy of [management review](#) meetings is more [likely](#) within larger [organisations](#) to ensure that each meeting is [effective](#) and [efficient](#) with appropriate terms of reference. The [design](#) of this [structure](#) should facilitate the optimization of the overall [review](#) and [action process](#) of the [organisation](#) as a whole.

Meetings may be face to face or facilitated via telephone or [IT](#) conferencing.

### E.12.2. Review

≤ The [objective](#) of [management review](#) is to consider individual and collective [aspects](#) of the [performance](#) of the [organisation](#) as well as its external [environment](#) to explore and agree [actions](#) that can be taken to improve the [organisation's management system](#) and [processes](#) and ensure that they take account of the changing external [environment](#). [Review](#) should be both [reactively](#) and [proactively](#) focused – refer to section 0 [Review and Action](#).

[Management review](#) topics are not distinct and may overlap during the conduct of [reviews](#) requiring cross-referencing when generating [records](#). Individual [reviews](#) may be closely linked with [planning processes](#) and [planned monitoring processes](#) and are often integrated e.g. legislation and standards compliance and [audits](#) although the outputs are still fed into the broader main [management review](#) and [action processes](#).

At any given time different [aspects](#) of the [organisation's performance](#) may be improving, steady or declining but cannot be fully known because the [operations](#) of an [organisation](#) are often complex, non-homogeneous and cannot be fully and accurately measured in real time. [Organisations](#) are also constantly [reactively](#) and [proactively](#) interacting with their external [environment](#). Judgements on the [organisation's performance](#) should take account of [key performance indicators](#) and other [data](#) obtained from [analysis](#), [reactive investigation](#) and [planned monitoring](#) – refer to section C.4.3.2 [Indicators](#), 0 [Reactive investigation – Events](#) and 0 [Planned monitoring](#).

For [organisations managing](#) potential [threats](#) from low frequency high [impact events](#) where direct [performance data](#) is usually limited they should be particularly vigilant regarding undetected [organizational](#) decline towards disfunctionality – refer to sections 0 [Planned monitoring](#) and E.11.1 [Monitoring planning](#).

The frequency of periodic review of legislation and adopted standards may vary depending on the importance of the [requirement](#), the [likelihood](#) of variations in [performance](#) (e.g. due to varying [operation conditions](#)) and the [organisation's](#) past [performance](#), but all compliance obligations should be appropriately [reviewed](#) – refer to section E.1.5 [Legislation and standards](#). See also section E.1.1 [Foundation planning](#) with respect to cyclic [planning](#).

An [organisation](#) may wish to combine its [reviews](#) of compliance with voluntary obligations and legal [requirements](#). In the [event](#) that the results indicate a [failure](#) to meet a legal [requirement](#), the [organisation](#) should [determine](#) and implement the [actions](#) necessary to achieve compliance. This may require [communication](#) with the regulatory agency and agreement on a course of [action](#) to re-establish compliance with legal [requirements](#). The outputs and outcomes of this [process](#) should be considered in the main [management review](#) and [actions](#).

### E.12.3. Review output and action

≤ It is important that meeting minutes are clearly and accurately [recorded](#) and [action plans](#), where appropriate, agreed and approved to [record required actions](#) and facilitate [monitoring](#) of their completion.

[Continual](#) improvement and change involves making changes to the [design](#) and implementation of the [management system](#) to improve the [organisation's](#) ability to achieve [conformity](#) with the [requirements](#) of this [MSS](#) and meet its [strategic plan](#), [objectives](#) and [policy](#) commitments. Typical issues that need to be considered include:

- Analysing the external and internal context of the [organisation](#),
- Determining the [needs](#) and [expectations](#) of [stakeholders](#),
- Taking [preventive action](#) to address [opportunities](#) and [risks](#),
- Taking into account complaints and opinions of the [stakeholders](#),
- Establishing [objectives](#),
- Implementing [operational](#) controls and taking into consideration new technologies, methods or new [data](#),
- [Monitoring, measuring](#), analysing and [reviewing performance](#),
- Conducting [planned monitoring](#),
- Conducting reviews and taking [action](#) to improve and remain aligned with evolving [stakeholder needs](#) and [expectations](#),
- Reacting to nonconformities and implementing [corrective actions](#).

Although there may be [value](#) in improving individual elements of the [management system](#), the intended outcome of [planned actions](#) and other [structural](#) and [process](#) changes, the [organisation](#) should focus on its overall [performance](#) and not just its elements in isolation. To achieve this, the improvement of any single element must be viewed with respect to the functioning of the whole [organisation](#), which implies the [need](#) for cooperation and coordination across the [organisation](#). Where conflicts are identified, they should be [creatively](#) resolved through the constructive engagement of all those [responsible](#) and relevant [stakeholders](#).

The rate, extent and timescale of [actions](#) that support [continual](#) improvement should be [determined](#) by the [organisation](#) in light of its context, [economic](#) factors, and other circumstances. [Performance](#) improvement involves taking [action](#) related to the [management](#) of the [organisation's aspects](#) towards reducing adverse [impacts](#) or increasing beneficial [impacts](#) with respect to the various dimensions of the [organisation's performance](#) as judged individually by its [stakeholders](#).

#### **E.12.4. Action realization**

≤ A computer [database](#) should be considered to [track](#) the progress of [management action](#) realization, including the delegation of an [action](#) to multiple sub [actions](#), to make the current status of [actions](#) [transparent](#).

Many [actions](#) involve [significant](#) change and should be [managed](#) as per section 0 [Change](#).

## Definitions

For the [purposes](#) of this [management system](#) specification, the following terms and [definitions](#) apply.

Terms have as far as possible been [defined](#) to be generic and inclusive to support a holistic description of the

[management](#) of any type or size of [organisation](#). Many of the [definitions](#) relate things to a [stakeholder](#) perspective such that it becomes [relativistic](#).

*The beginning of wisdom is to call things by their proper name.”  
— Confucius —*

The [definitions](#) also provide consistent verbal and written language to [communicate](#) and conduct [management](#) across [organisations](#) of differing types and disciplines

This section of the [MSS](#) includes the following subsections:

- [Definition of Acronyms](#)
- [Definition of Document Types](#)
- [Definition of General Terms](#)

[Appendix 4: Management Tools and Techniques](#) also contains relevant definitions.

### Definition of Acronyms

#### AI

Artificial intelligence.

#### ALARP

As low as reasonably practicable.

#### CEO

[Chief executive](#) officer.

#### CPD

Continual professional development.

#### CSR

Corporate [social responsibility](#).

#### CQI

Chartered Quality Institute. A UK chartered professional body dedicated to the promotion of [quality management](#).

#### IT

Information technology.

#### MSS

[Management system](#) specification – this [document](#).

#### PPE

Personal protective equipment. Equipment worn by a person to provide personal protection to a part or all of the body.

**RPE**

Respiratory protective equipment. Equipment used by an individual to support or aid their respiration.

**SMART**

Specific, measurable, attainable, realistic and time-sensitive. SMART is a mnemonic guide used for setting [objectives](#) and [key performance indicators](#) (KPIs).

**SPC**

[Statistical process control](#).

## Definition of Document Types

Refer to section E.4.1 [Management system structure](#).

The following documents although commonly existing as separate documents, they may exist integrated in a single document.

**Checklist**

A type of informational job aid used to reduce [human error](#) by compensating for potential limits of human memory and attention. It helps to ensure consistency and completeness in carrying out a task.

NOTE 1: A basic example is the “to do list.” A more advanced checklist would be a [schedule](#).

**Contingency plan**

A [document\(s\)](#) defining [arrangements](#) for circumstances where there has been a serious breakdown in normal core or [supporting processes](#) or [structures](#) with the [objective](#) of avoiding or mitigating further loss and restoring normality [effectively](#) and [efficiently](#).

NOTE 1: [Contingency plans](#) may be referred to as [crisis plans](#), [emergency plans](#), [disaster recovery plans](#), business continuity [plans](#) or [goods](#) recall [plans](#) etc. – refer to section C.7.2 [Contingencies](#).

**Document template**

A [document](#) containing a [structure](#) that may be customised to meet the [requirements](#) of the circumstances.

NOTE 1: [Document](#) templates are [maintained](#) to aid the production of specific [documents](#) such as [contracts](#), method statements and [risk assessments](#). They help to ensure compliance with a uniform corporate style and the [management system](#) while also acting as a receptacle for accumulated good practice.

NOTE 2: [Document](#) templates differ from [forms](#) by being able to be customised.

**Form**

A [document](#) with a fixed non-customisable [structure](#) designed to receive [data](#).

NOTE 1: Forms are [maintained](#) to facilitate [process](#) compliance with the [management system](#) and to generate [records](#) with a common [structure](#).

### Handbook

A type of reference [document](#), or other collection of instructions, that is intended to provide ready quick reference.

NOTE 1: Handbooks may deal with any topic and are generally compendiums of information in a particular field or about a particular technique. They are [designed](#) to be easily consulted and provide quick answers in a certain area.

NOTE 2: The [employee](#) handbooks may be used to provide information and guidance to be followed by [employees](#) and [contracted](#) personnel in a straightforward format free of other [aspects](#) of the of the [organisation's management system](#) that are not relevant. The handbook may replicate [aspects](#) of the main [management system](#) such as [policy statements](#) but also include [arrangements](#) not covered elsewhere. An [employee](#) handbook avoids direct [access](#) to the [management system](#) as a whole but may usefully include references to it if the [employee](#) wishes to seek more information or elaboration.

### Interface agreement

A [document](#) stating how two or more [organisations](#) will [cooperate](#) and [coordinate](#) activities to meet mutually agreed [objectives](#).

NOTE 1: Where this is [defined](#) by one party only it is referred to as an interface statement.

### Job description

A [document](#) defining key [aspects](#) of a [role](#) or [post](#) within an [organisation](#) or [project](#) typically covering:

- Job title
- Grade
- [Purpose](#)
- [Organisation structure](#) and position in the [organisation](#)
- [Accountabilities](#) and lines of reporting
- [Duties](#)
- General [competence](#)

### Operation manual

A manual that [records](#) everything [required](#) to [effectively](#), [efficiently](#) and [safely operate](#) an item or set of [infrastructure](#).

NOTE 1: Operation manuals are often combined with [maintenance manuals](#).

### Policy statement

A [document\(s\)](#) expressing the [organisation's](#) or [project's vision](#), [values](#) and commitment to achieving [performance](#).

### Process definition

A [document\(s\)](#) that [defines](#) the philosophy, rules and guidance for conducting an [automated process](#) or [manual process](#) for delivering a [good](#) and/or [service](#).

NOTE 1: Process definitions are important [documents](#) that are [maintained](#) to control and guide major [processes](#) that comprise several sequential and/or parallel tasks. [Process definitions](#) typically reference and [coordinate](#) subordinate control and [record documents](#) and [define](#) the [responsible](#) persons. Process definitions also typically include [project control documents](#) that go under various names.

NOTE 2: The format of process definitions may vary but often include graphical representations of the series/parallel sequence of tasks displayed in 'swim lanes' or other graphical layouts.

### **Maintenance manual**

A manual that [records](#) everything [required](#) to [effectively](#), [efficiently](#) and [safely maintain](#) an item or set of [infrastructure](#).

NOTE 1: Maintenance manuals are often combined with [operation manuals](#).

### **Management manual**

A [document](#) or collection of [documents](#) describing all or the upper part of the [management system](#).

### **Management procedure**

A [document](#) defining the [management actions](#) and [responsibilities](#) to control and guide core, supporting and [contingency organisation](#) and [project processes](#).

### **Schedule**

A [document](#) containing [data](#) in an orderly [structure](#).

NOTE 1: A schedule is typically used for [data](#) that may [need](#) to be changed frequently and avoids the re-issue of larger controlled [documents](#).

NOTE 2: A schedule may be part of a formal [database](#).

NOTE 3: Typical applications of a schedule are shown in section E.4.1 [Management system structure](#).

### **Standard or regulation map**

A [document](#) in the form of a matrix that demonstrates how the elements of the standard or regulation correspond to the elements of the [organisation's management system](#).

NOTE: A typical example is [Appendix 9: Comparison with other Standards](#) .

### **Training module**

A [document\(s\)](#) defining the detailed [arrangements](#) for delivering a [defined](#) package of [training](#) and its assessment.

NOTE 1: The scope of a [training module](#) may include internally and externally delivered on-job or classroom based [training](#) including informal [training](#) such as 'toolbox talks'.

### **Work instruction**

A [document](#) defining a [system](#) of instruction and guidance to control and guide work [processes](#).

NOTE 1: Work instructions may specify [good](#) or [service](#) characteristics to satisfy [requirements](#) and are often contained in drawings, specifications, [schedules](#), orders, patient prescription, etc.

NOTE 2: Work Instructions are used to provide detailed [systematic](#) instruction and guidance on how to correctly perform [organisation](#) or [project](#) tasks. They may also be used to control [processes](#) requiring a high degree of formality such as those that use a [permit to work](#) or [permit for work](#).

## Definition of General Terms

### Access

Means or [opportunity](#) to approach or enter a place.

NOTE 1: A place may be physical or virtual.

### Accountability

Obligation to report, explain and be answerable for lack of performance and breaches of [authority](#) and [responsibility](#) or [duties](#). See also [authority](#), [responsibility](#), [delegation](#) and section E.2.4.3 [Appointment](#).

NOTE 1: Being held accountable might result in disciplinary or other punitive action.

NOTE 2: Accountability closes the [management](#) control loop such that [review](#) and [action](#) results if an individual fails to perform or [violates](#) the [management system](#), [contracts](#), legislation or other defined [requirements](#). See also sections E.2.4.8 [Discipline](#) and E.2.5.3 [Management of conflict](#)

### Action

[Process](#) of doing something to achieve an [objective](#).

### Agility

Ability of structure to quickly change direction or reconfigure to meet new [requirements](#) or challenges.

### Algorithm

Finite set of unambiguous instructions that, given some set of initial conditions, can be performed in a prescribed sequence to achieve a certain goal and that has a recognizable set of end conditions.

### Analysis

Separation of an intellectual or material whole into its constituent parts for individual study. See also [synthesis](#).

### Arrangement

[Plan](#) and/or preparatory [actions](#) taken to meet future [requirements](#).

### As applicable

Applying or capable of being applied

## As appropriate

Suitable for a particular person, condition, occasion, or place.

## Aspect

Characteristic of an [organisation's policy](#), asset, [operation](#) or [event](#) that has or may potentially have an [impact](#) on something [valued](#) by a [stakeholder](#).

NOTE 1: [Impacts](#) may occur at local, regional and global scales, while they may also be direct, indirect or cumulative by nature.

NOTE 2: [Aspects](#) may include [planned](#) and [unplanned events](#).

NOTE 3: The most important [aspects](#) of an [organisation](#) needing to be identified and [managed](#) are those [significantly impacting](#) the [needs](#) and [expectations](#) of [stakeholders](#) and typically include those with the potential to or actually [impact](#) the [environment](#), people and the economy in both the short and long term.

NOTE 4: Examples of general [organisation aspects](#) are shown in [Appendix 6: General Aspects of an Organisation](#).

## Aspect and impact identification

Determining what [aspects](#) and [impacts](#) exist or are anticipated, their characteristics and where situated in space and time.

Note 1: [Aspect](#) and [impact](#) identification may be referred to as [prospects and/or risks identification](#) and essentially fulfils the same process as [identifying opportunities](#) and [threats/hazards](#).

NOTE 2: [Aspects](#) and [impacts](#) identification is an essential prerequisite prior to conducting [prospect and/or risk assessment](#).

## Aspiration

[Stakeholder](#) desire, longing, aim or ambition. See also [need](#).

## Asset

Something that has [value](#) and is capable of being [managed](#) and/or traded. See also [intellectual property](#).

NOTE 1: Examples of assets include legal [entities](#), [competence](#), [knowledge](#), [infrastructure](#), commodities, [data](#), reputation etc.

## Assurance

Set of activities intended to collectively establish confidence that [stakeholder requirements](#) will be met.

NOTE 1: A key [aspect](#) of assurance is the generation and retention of [objective](#) evidence which is readily able to be [proactively monitored](#) as covered in section 0 [Planned monitoring](#).

NOTE 2: Assurance is often referred to as [quality](#) assurance, [management assurance](#), [systems](#) assurance, [risk](#) assurance, financial assurance etc.

### Atomic

Fundamental element of a [structure](#).

### Audit

[Systematic](#), independent and [documented process](#) for objectively obtaining and evaluating evidence to [determine](#) the extent to which the audit [criteria](#) are fulfilled.

NOTE 1: An audit can be an [internal audit \(first party\)](#) or an [external audit \(second party\)](#) or external [independent audit \(third party\)](#). A bespoke audit can also be used reactively to determine how well an organisation's or project's structures and processes are functioning to assist with the investigation of an unplanned event.

NOTE 2: The audit scope may include [aspects](#) spanning multiple [structures](#), [processes](#) and disciplines.

NOTE 3: An audit team may be one or more people and led by a qualified lead auditor supported by [competent](#) people appropriate to the audit scope, as necessary.

### Authority

The assigned power or right to give orders, make decisions, and enforce obedience. See also [accountability](#), [responsibility](#), [delegation](#) and section E.2.4.3 [Appointment](#).

### Automatic process

[Process](#) that is capable of occurring without the [need](#) for external intervention.

### Availability

The degree to which a person or [structure](#) is able to fulfil its [purpose](#).

NOTE 1: it may be defined as the proportion of time a [system](#) is in a functioning state.

### Behaviour

Way in which a person or something conducts itself.

### Benchmarking

[Process](#) used to search for best practices.

NOTE 1: Benchmarking can be applied to strategies, [tactics](#), [operations](#), [goods](#), [services](#) and any [aspect](#) of a [management system](#) typically shown in [Appendix 6: General Aspects of an Organisation](#) .

NOTE 2: Best practices can be found either within the [organisation](#) or within others. It usually means [identifying organisations](#) that are doing something in a very good way and then trying to emulate it.

NOTE 3: External benchmarking includes competitive benchmarking involving comparisons with how the [organisation](#) does things with its competitors and generic benchmarking involving comparing the [organisation](#) with [organisations](#) in unrelated sectors.

### Best Available Techniques (BAT)

[Processes](#) that avoid or reduce [emissions](#) resulting from certain installations to reduce the [impact](#) on the [environment](#) as a whole and takes into account the balance between the costs and [environmental](#) benefits. See also [Best Practicable Environmental Option \(BPEO\)](#).

NOTE 1: Use of BAT is [required](#) by bodies licensing the major potentially polluting industries.

### Best Practicable Environmental Option (BPEO)

Outcome of a [systematic](#) consultative and decision making [procedure](#) that emphasises the protection and conservation of the [environment](#) across land, air and water. See also [Best Available Techniques \(BAT\)](#).

NOTE 1: The BPEO [process](#) establishes for a given set of [objectives](#), the [option](#) that provides the most benefits or the least damage to the [environment](#), as a whole, at acceptable cost, in the long term as well as in the short term”.

### Brand

[Trademark](#) or distinctive name [identifying](#) a [good](#) or [service](#) or [organisation](#).

### Bribery

[Process](#) of giving money or gift(s) with the intention of altering the [behaviour](#) of the recipient.

### Calibrate

Check, adjust, or determine by comparison with a standard.

### Capital

Wealth in the form of money or other [assets](#) owned by a person or [organisation](#) or [available](#) or contributed for a particular [purpose](#) such as starting an [organisation](#) or investing.

NOTE 1: Capital embraces:

- [Financial capital](#),
- [Human capital](#),
- [Manufactured capital](#),
- [Natural capital](#),
- [Social capital](#).

### Certificate

Document serving as evidence or as written testimony, as of status, qualifications, privileges, or the truth of something.

NOTE 1: Commonly used to record personnel or an organisation achieving a recognised level of competence or recording compliance.

### Chief executive

Highest-ranking corporate officer(s), executive(s) or administrator(s).

### Classification

The result of assigning elements to defined categories.

NOTE 1: Classification is commonly performed to differentiate management topics, structures, processes etc. to aid understanding, [communication](#), accounting and [management](#) of [structures](#) and [processes](#).

### **Coincident indicator**

[Indicator](#) that usually changes at approximately the same time as the [organisation's](#) or [system's behaviour](#) as a whole changes. See also [lagging indicator](#) and [leading indicator](#).

### **Colour coded communication (CCC)**

Adoption of standard [defined](#) colours to signify the significance of an [aspect](#) to aid [communication](#).

NOTE 1: The traffic light colours are commonly used to indicate levels of significance or [risk](#) etc. As an example, refer to [Appendix 3: Prospect and Risk Rating System Example](#).

### **Commerce**

Social [process](#) of exchanging or purchasing of commodities.

NOTE 1: Commodities may include [goods](#), [services](#), ideas or any type of legal [entity](#).

NOTE 2: A commercial [action](#) is normally agreed via a [contractual process](#).

### **Commercial awareness**

[Knowledge](#) of how the functionality of [organisations](#) fulfil their [purpose](#), generate [value](#) and how the [value](#) can be traded whilst remaining financially viable.

NOTE 1: Business [organisations](#) aim to be profitable while [organisations](#) such as a charity just [need](#) to be financially viable.

### **Commercial responsibility**

Characteristic of an individual or [organisation](#) that ensures their [commercial processes](#) are conducted [ethically](#). See also [social responsibility](#).

NOTE 1: The focus of [commercial responsibility](#) is on the [stakeholders](#) that collectively directly or indirectly fulfils the [purpose](#) of the [organisation](#).

### **Common cause failure**

Single [failure](#) or [condition](#) that affects the [operation](#) of multiple [structures](#) or [processes](#) that would otherwise be considered independent.

NOTE 1: Common cause [failures](#) undermine the benefits obtained from [redundancy](#) necessitating the introduction of [diversity](#).

### **Communicate**

The process of conveying information through the exchange of ideas, feelings, intentions, attitudes, expectations, perceptions or commands.

NOTE 1: Human communication is generally via speech, gestures, writings and behaviour but may also be via other means such as electromagnetic, chemical or physical phenomena.

NOTE 2: Communication may take place between organisms and machines.

### Competence

Ability to perform a [post](#), [role](#) or task to a [required](#) standard.

NOTE 1: Competence may include inherent and learned [aspects](#), [tacit knowledge](#), ability to apply [explicit knowledge](#), as well as personal characteristics such as [integrity](#), [creativity](#) and [leadership](#) etc.

### Competence Base

The [competence](#) that an [organisation](#) has [access](#) to either directly within or indirectly outside the [organisation](#).

[Competence](#) base is elaborated further in section A.1.1 [Context of a Management System](#).

### Condition

State of something or circumstances.

### Confidentiality

Set of rules limiting [access](#) or places restrictions on certain types of [data](#).

### Configuration

The way the elements of a [structure](#) are arranged.

NOTE 1: Configuration may be critical to the [effectiveness](#) and [efficiency](#) of a [structure](#) and its associated [processes](#). Refer to section E.5.4.4 [Configuration](#).

### Conflicting stakeholder

[Stakeholder](#) that has interests that does not or may not align with the [organisation's purpose](#) or [objectives](#).

NOTE 1: Competitors and criminals typically have conflicting interests to the [organisation](#).

### Conformity

Fulfilment of a [requirement](#). See also [nonconformity](#).

### Consciousness

[Aspects](#) of self that enables awareness of self and external things.

NOTE 1: Consciousness is nurtured by a good working [environment](#) and may be degraded by [stress](#).

NOTE 2: The higher the level of consciousness of a person the more they will see themselves as part of their [environment](#) and [likely](#) to act for the common good.

Consciousness is elaborated further in section A.1.1 [Context of a Management System](#).

### Contingency

Provision for a possible [event](#) or circumstance.

### Contingency process

Process which is initiated when a [normal structure](#) and/or [normal process](#) fails or a [significant](#) internal or external [event](#) has occurs requiring [prospect](#) enhancement and/or [risk mitigation](#) and the restoration of normal [processes](#). See also [core process](#) and [supporting process](#).

### **Contingency structure**

[Structure](#) whose [purpose](#) is to host [contingency processes](#).

### **Contract**

Agreement entered into voluntarily by two or more parties with the intention of creating a legal obligation.

NOTE 1: A contract is normally written but may also be oral and may vary considerably in its complexity.

NOTE 2: The remedy for breach of contract can be damages or financial compensation.

NOTE 3: Contract law varies greatly from one jurisdiction to another.

### **Continual**

Duration that occurs over a period of time, but with intervals of interruption.

NOTE 1: Continual is unlike continuous' which indicates duration without interruption. Continual is therefore the appropriate word use in the context of improvement.

### **Convention**

Standard way, in which something is usually done, labelled or presented.

NOTE 1: Conventions may be [defined](#) for nomenclature, dimensional units for [measurement](#), colour coding, traffic flow etc.

NOTE 1: Examples of a convention include [Colour coded communication \(CCC\)](#), the handedness of traffic flows passing on the left or right, standard nomenclature etc.

### **Cooperate**

Work or act together willingly and agreeably to achieve an agreed [objective](#).

### **Coordinate**

Bring the different elements of a [process](#), [project](#) or [organisation](#) into a harmonious [effective](#) and [efficient](#) relationship.

NOTE 1: Coordination becomes increasingly important as what is being coordinated becomes more complex and/or involves more parties.

### **Core process**

[Operational process](#) that delivers a [good](#) or [service](#) to an external [customer](#) in return for a [service](#) or financial payment. See also [supporting process](#) and [contingency process](#)

NOTE 1: Core [processes](#) [define](#) the [purpose](#) of the [organisation](#).

## Corporate leadership

Corporate [leadership](#) is the directing individual or collective mind of the [organisation](#) exercised by the top [management](#) at the most senior level.

Corporate [leadership](#) is elaborated further in section A.1.1 [Context of a Management System](#).

## Correction

Transformation from [nonconformity](#) to [conformity](#).

## Corrective action

[Process](#) of rectifying a [nonconformity](#). See also [preventive action](#).

NOTE 1: Corrective [action](#) may include [repairing](#), rework or adjustment but excludes [disposition of the nonconformity](#) and [preventive actions](#). It includes the [performance](#) of [contingency processes](#).

NOTE 2: Corrective [action](#) is a [reactive action](#) based on what has happened and/or the current situation.

NOTE 3: [Corrective action](#) and [preventive action](#) may be performed simultaneously following the [analysis](#) of the [immediate causes](#) and [root causes](#) of an [event](#).

Refer to section E.9.2 [Corrective and preventive action](#).

## Cost benefit analysis

A [systematic](#) approach for estimating the benefits and costs associated with alternative [options](#).

NOTE 1: Cost benefit analysis may be used to [determine](#) if an [option](#) is a sound investment/decision or to provide a basis for comparing [projects](#). It involves comparing the total expected cost of each [option](#) against the total expected benefits, to see whether the benefits sufficiently outweigh the costs.

## Covert

Not openly acknowledged or displayed. See also [Overt](#).

NOTE: Covert may be associated with [structures](#) and [processes](#) that includes activities and [management systems](#).

## Creativity

Tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, [communicating](#) with others, and creating things.

NOTE 1: Creativity is a prerequisite for [innovation](#).

## Crisis

A time of intense difficulty, following a major [event](#), requiring an [organisation](#) to [manage](#) differently to the way than it does normally. See also [emergency](#) and [disaster recovery](#).

NOTE 1: Crises [require](#) special [contingency arrangements](#) – refer to section E.8.2.2 [Emergencies, Crises and Disaster Recovery](#).

**Criteria**

A standard of judgment or criticism; a rule or principle for evaluating or testing something

**Cryptography**

The art of protecting [data](#) by [processing](#) it (encrypting it) into an unreadable format, called cipher text.

**Cryptography keys**

A piece of [data](#) that determines the [process](#) output of a [cryptographic algorithm](#) or cipher.

NOTE 1: Without a key, the [algorithm](#) would produce no useful result.

**Customer**

Person or [organisation](#) that purchases or is the recipient of [goods](#) or [services](#) from another person or [organisation](#).

**Danger**

Exposure to a [harmful structure](#) or [process](#).

**Data**

Facts, statistics, or items of information.

NOTE 1: Data may include alphanumeric text, numbers, photographs, video, [software](#) etc.

NOTE 2: Data over its [life cycle](#) may be created, stored, [accessed](#), [processed](#), [communicated](#), shared, replicated, [encrypted](#), lost, corrupted, stolen or destroyed.

NOTE 3: Data may move in space up to the speed of light and exist in time over its [life cycle](#).

**Database**

[Structured](#) set of [data](#).

NOTE 1: A database typically is hosted by a computer but may exist on paper e.g. a card index.

**Defense in depth**

[Coordinate](#)d use of multiple [diverse risk barriers](#) to protect the [integrity](#) of an [asset](#) or [enterprise](#).

**Define**

State or describe exactly the nature, scope or meaning of that which is under consideration.

**Delegate**

Assign [authority](#) and/or [responsibility](#) to a subordinate person or group. See also [authority](#), [responsibility](#) and [accountability](#).

NOTE 1: Delegation may include making the person or team accountable.

NOTE 2: The person's [authority](#), [responsibility](#) and [accountability](#) are not changed by delegating to a subordinate.

## Delivery chain

Sequence of parties and [processes](#) that deliver [goods](#) and/or a [services](#) to the customers that ultimately use them. See also [supply chain](#) and [value chain](#).

## Design

Working out the form, fit or function of something.

## Design principles

[Principles](#) on which the [design](#) is based.

NOTE 1: [Design principles](#) are established at the beginning of the [design process](#) and subjected to [prospect and risk assessment](#).

## Determine

Establish or find out.

## Disaster recovery

The process that an [organisation](#) implements to recover from a disaster or other major negative [event](#). See also [crisis](#) and [emergency](#).

NOTE 1: Disaster recovery is a time of great difficulty requiring an [organisation](#) to [manage](#) differently to the way than it does normally. Special [contingency arrangements](#) are [required](#) – refer to section E.8.2.2 [Emergencies, Crises and Disaster Recovery](#).

NOTE 2: Disaster recovery is also referred to as business continuity.

## Diversity

[Quality](#) or state of having many different forms, types, ideas, etc.

NOTE 1: Includes the state of having people of different races, cultures or other characteristics in a group.

## Document

[Structure](#) of [data](#) or for recording [data](#). See also section [Definition of Document Types](#).

NOTE 1: The structure's medium can be physical, electrical, magnetic, optical etc.

## Due diligence

[Process](#) of investigating an [organisation](#) or person prior to completing a [contract](#) or making or confirming a decision. See also [evidence based](#), [evidence informed](#), [prospect and/or risk based](#) and [prospect and/or risk informed](#).

NOTE 1: Performing due diligence may [significantly](#) contribute to decision making by enhancing the amount and [quality](#) of information [available](#).

## Duty

Obligatory tasks, conduct, [service](#), or functions that arise from a person being appointed to a [post](#), [role](#) or other position of [employment](#).

**Economic**

Of or relating to the production, development, and management of material wealth, as of a country, household, or business enterprise.

**Ecosystem**

Community of living organisms (plants, animals and microbes) in conjunction with the nonliving components of their [environment](#) (air, water and mineral soil), interacting as a [system](#).

NOTE 1: These biotic and abiotic components are regarded as linked together through nutrient cycles and energy flows. As ecosystems are defined by the [network](#) of interactions among organisms, and between organisms and their [environment](#), they can be of any size but usually encompass specific, limited spaces but can be the entire planet.

**Education**

Act or process of imparting or acquiring general knowledge, developing the powers of reasoning and judgment, and generally of preparing oneself or others intellectually for mature life or for work. See also [training](#).

**Effective**

Extent to which [structures](#) and [processes](#) achieve the desired intention. See also [efficient](#).

**Efficient**

Extent to which a [structure](#) or [process](#) makes the best use of [resources](#). See also [effective](#).

**Emergency**

A time of immediate danger requiring an [organisation](#) to [manage](#) differently to the way than it does normally. See also [crisis](#) and [disaster recovery](#).

NOTE 1: [Emergencies require](#) special [contingency arrangements](#) to reduce [risk](#) with respect to the [safety](#) of personnel, other [assets](#) or the [environment](#) – refer to section E.8.2.2 [Emergencies, Crises and Disaster Recovery](#).

**Emission**

The production and discharge of matter or energy from a [structure](#) hosting a [process](#).

**Enterprise**

Any [entity](#) engaged in an [economic](#) activity, irrespective of its legal form.

**Entity**

Something with distinct and independent existence.

**Environment**

Surroundings in which an [organisation operates](#). See also [workplace](#).

NOTE 1: Surroundings include the local, regional and global [entities](#) and can include air, water, land, natural [resources](#), bio-[diversity](#) and [ecosystems](#), humans, and their interrelations.

## Ethical

Morally correct. See also [equitable](#).

## Ethical behaviour

[Behaviour](#) that is in accordance with acceptable [principles](#) of right or good conduct in the context of a particular situation and is consistent with [international norms of behaviour](#).

## Employee

Individual in a relationship recognised as an employment relationship in national law or practice.

NOTE 1: Employee is a narrower term than [worker](#).

## Equitable

Fair, just, right and reasonable as judged by a consensus of [stakeholders](#). See also [ethical](#).

NOTE 1: Where a legally compliant win-win solution is not possible no [stakeholder](#) should lose unreasonably at the expense of the others.

## Event

An [unplanned significant](#) change to a [structure](#) and/or [process](#) of interest to a [stakeholder](#).

NOTE 1: The time span of an event is [defined](#) by the [stakeholder](#).

NOTE 2: An event may have sub-events.

NOTE 3: [stakeholders](#) may [define](#) events differently according to their own perspective and may judge the [impact\(s\)](#) of an event to be adverse or beneficial.

NOTE 4: An event may have multiple [diverse aspects](#) and [impacts](#) i.e. affect different [aspects](#) of [organizational performance](#) as typically shown in [Appendix 6: General Aspects of an Organisation](#).

NOTE 5: Events may be the precursor to change such as [corrective action](#) and/or [preventive action](#) – refer to section 0 [Change](#).

## Event classification

The [classifying](#) of [events](#) according to the potential or actual [impact](#) on the perceived [stakeholder needs](#) and [expectations](#).

## Evidence based

Decision, [structure](#) or [process](#) based on [verified](#) evidence. See also [evidence informed](#), [risk informed risk based](#) and [due diligence](#).

## Evidence informed

Decision, [structure](#) or [process](#) that takes account of [verified](#) evidence. See also [evidence based](#), [risk based](#), [risk informed](#) and [due diligence](#).

## Expectation

Strong belief that something will happen or be the case in the future.

**Expert**

[Competent](#) person able to formally demonstrate specialist [knowledge](#), skills and experience.

**Expert committee**

Committee of [experts](#) able to collectively provide [expert](#) advice and independent opinion to the directors and managers of an [organisation](#).

NOTE 1: An expert committee works to terms of reference agreeable to or approved by the [organisation's stakeholders](#).

**Explicit knowledge**

[Knowledge](#) that has been articulated, codified, and stored in certain media. See also [tacit knowledge](#).

NOTE 1: Explicit [knowledge](#) can be readily transmitted to others e.g. the information contained in encyclopaedias or the [management system documentation](#).

**External audit (2<sup>nd</sup> party audit)**

[Audits](#) conducted for an [organisation](#) on external [organisations](#) such as [suppliers](#).

**Facility**

Place, building [structures](#) or equipment provided for a particular purpose.

NOTE 1: Facilities may be owned, leased or otherwise used by an [organisation](#).

**Failure**

An outcome which does not satisfy a [stakeholder](#). See also [success](#).

**Financial capital**

[Capital](#) in the form of currency used by individuals and [organisations](#) to purchase [goods](#) and [services](#).

**Fitness**

Acceptable [condition](#).

**For-cause**

Legitimate, justified reason for taking a course of [action](#).

NOTE 1: For-cause [action](#) is taken as a result of breach of [contract](#).

**Fractal**

Seemingly irregular shape or [structure](#) formed by repeated subdivisions of a basic form, and having a pattern of regularity underlying its apparent randomness.

NOTE 1: Every part of a fractal (irrespective of its scale) is essentially a reduced size copy of the whole (a property called 'self-similarity'), and forms an organized hierarchy with its upper level and lower level counterparts.

NOTE 2: Typical examples in nature with a fractal shape or [structure](#) are coastlines, clouds, trees and mountains. Conceptual [structures](#) in [management](#) that have a fractal nature include [Plan-Do-Check-Act management](#) cycles where each of the four elements has a [Plan-Do-Check-Act](#) sub-[structure](#). The concept of a [system](#) or [process](#) is still applicable during repeated zooming in until the [atomic](#) level is reached.

### **Fully integrated management system**

[Integrated management system](#) that addresses the totality of the [organisation's structures](#) and [processes](#) with the exception of [arrangements](#) that need to be [covert](#).

NOTE 1: The [need](#) to [define covert management arrangements](#) will necessitate one or more separate [covert management systems](#).

### **Future proofing**

[Process](#) of anticipating the future and attempting to make [structures](#) and [processes resilient](#) to future natural and manmade changes.

### **Gender equality**

Equitable treatment for women and men.

NOTE 1: This includes equal treatment or, in some instances, treatment that is different but considered equivalent in terms of rights, benefits, obligations and [opportunities](#).

### **Good**

Item capable of being owned.

NOTE 1: Goods are [structural](#) and are capable of being physically or intangibly delivered to a consumer.

NOTE 2: Intangible goods (virtual) can only be stored, delivered, and consumed by means of media.

NOTE 3: Goods, both tangibles and intangibles, may involve the transfer of good ownership to the consumer unlike [services](#) that do not normally involve transfer of ownership – refer to [service](#).

### **Goods and/or services delivery capability**

Capability of [structures](#) and [processes](#) to deliver [good\(s\)](#) and/or [service\(s\)](#).

NOTE 1: [Structures](#) and [processes](#) may at any given time have a current [goods](#) and/or [services](#) capability that are less than the [design](#) capability.

### **Governance**

All [processes](#) of governing, whether undertaken by a government, [market](#) or network, whether over a family, tribe, formal or informal [organisation](#) or territory and whether through laws, norms, power or language.

NOTE 1: Governance relates to the [processes](#) of interaction and decision-making among those involved in a collective problem that lead to the creation, reinforcement, or reproduction of social norms and institutions.

## Harm

Undesired destruction or degrading of a [structure](#).

NOTE: A [structure](#) may be physical or virtual e.g. physical injury or corruption of [data](#).

## Hazard

Something or circumstances with the potential to cause [harm](#). See also [threat](#), [opportunity](#) and [stressor](#).

NOTE 1: Natural hazards typically include: Natural hazards Human diseases, Flooding, poor air quality, volcanic and seismic events, severe weather, wildfires, animal diseases etc. Non-natural hazards are those created through the activities of humankind.

## Health

[Conditions](#) of optimal functionality.

## Highly significant

[Significance](#) that is critical enough to potentially cause major conflict between [stakeholders](#) and/or the [organisation](#) leading to [organisation](#) disruption.

## Human capital

Stock of [competency](#) embodied in the ability to perform tasks that are used to create [value](#).

NOTE 1: This [capital](#) is often accumulated through experience, [education](#), [training](#) and nurture of [consciousness](#).

## Human error

Unintended [action](#) or decision leading to a deviation from a [defined stakeholder requirement](#). See also [human violation](#).

NOTE 1: Human error and its effects can be reduced through good structure, process and workplace design and the use of supporting aids such as [checklists](#) etc. – refer to sections E.7.1 [Structure and process design and development](#) and E.4.1 [Management system structure](#).

## Human violation

Deliberate deviation from a [management system](#) or other formally specified [stakeholder requirement](#). See also [human error](#).

NOTE 1: It may be a deviation from a legislative [requirement](#) or [contract](#).

## Identify

Establish the identity of something.

## Ill health

Identifiable, adverse physical or mental [condition](#) arising from and/or made worse by a work activity and/or work-related situation. See also [health](#).

## Immediate cause

Final act in a series of provocations leading to a particular outcome or [event](#), directly producing such result without the intervention of any further provocation.

NOTE 1: A train derailing because of a broken rail is an example of an immediate cause of an [event](#).

### Impact

Positive or negative effect on a person's, an [organisation's](#) or a [stakeholder's objectives](#), [needs](#), [expectations](#) or [aspirations](#) resulting from an [aspect](#) of the [organisation](#).

NOTE 1: It includes effects on the [organisation's policy](#), commitments and [objectives](#).

NOTE 2: [Objectives](#), [needs](#) and [expectations](#) include facets of [performance](#) such as those impacting humankind, [environment](#) and [commerce](#).

### Independent audit (3<sup>rd</sup> party audit)

[Audits](#) conducted by external, independent auditing [organisations](#).

### Indicator

Measurable representation of the [condition](#) or status of [operations](#), [management](#) or [conditions](#). See also [key performance indicator](#) and [prospect and/or risk indicator](#).

### Infrastructure

Entire [system](#) of [facilities](#), equipment, and [services](#) that an [organisation](#) needs to function.

NOTE 1: Infrastructure includes buildings, workspaces, plant, utilities, equipment (including hardware but not [software](#), which is [data](#)), and transportation, [communication](#) and information [systems](#).

### Initiative

Program or activity expressly devoted to meeting a particular [objective](#).

### Innovation

[Process](#) of translating an idea or invention into a new or improved [structure](#), [process](#), [good](#) or [service](#).

NOTE 1: Innovation critically depends on the lively [consciousness](#) and [creativity](#) of the [organisation's](#) personnel and the [management system](#), which should encourage participation and free flow of ideas between people and [organisations](#).

### Inspect

Look at a [structure](#) or [process](#) closely to assess its condition or [quality](#) or to discover any shortcomings.

### Integrated management

Approach to [management](#) that seeks to understand and [effectively](#) direct every [aspect](#) of an [organisation](#) so that the [needs](#) and [expectations](#) of all [stakeholders](#) are [equitably](#) satisfied by the best use of all [resources](#).

NOTE 1: 'direction' implies the use of a [management system](#) addressing the totality of the [organisation](#) and its interaction with [stakeholders](#).

NOTE 2: '[stakeholders](#)' and '[equitably](#)' implies that an [organisation](#) should seek [transparent](#) win-win solutions where this is possible.

NOTE 3: Integrated [management](#) makes no distinction in its general approach to [managing](#) potential gain and [managing](#) potential loss as perceived by [stakeholders](#).

NOTE 4: Integrated [management](#) recognizes no time, geographic, demographic or other types of boundary. It globally addresses future as well as current [stakeholder needs](#), which naturally promotes [sustainability](#). This implies that complete [life cycles](#) are addressed such as industry, [organisation](#), plant, [asset](#), [good](#) or [employee](#) (e.g. induction, development and retirement) etc.

NOTE 5: Best use of [resources](#) implies [effective](#), [efficient](#) ([waste](#) minimization), [agile](#) and [resilient processes](#) as judged by a consensus of [stakeholders](#).

NOTE 6: Integrated [management](#) implies that all elements of an [organisation](#) should add optimal [value](#) both individually and collectively i.e. acting as a whole and delivering a [synergistic](#) benefit.

NOTE 7: Integrated [management](#) allows uniformity and [diversity](#) to coexist harmoniously within an [organisation](#). Generic approaches are used only if they add [value](#).

### **Integrated management system**

[Management system](#) that has a scope that includes two or more [aspects](#) of an [organisation's performance](#) that is capable of being [managed](#) by separate distinct [management systems](#). See also [fully integrated management system](#).

NOTE 1: As an example, it may cover two or more of the [management](#) of [good](#) or [service](#) quality, [environment](#), and personnel [health](#) and [safety performance](#).

NOTE 2: A [management system](#) may be [fully integrated](#).

### **Integrity**

Characteristic of a person of being honest and having strong moral [principles](#), the state of being whole and undivided.

### **Intellectual property**

Creations of the mind.

NOTE 1: Intellectual property includes music, literature, and other artistic works; discoveries and inventions; and words, phrases, symbols, and [designs](#).

NOTE 2: Under intellectual property laws, owners of intellectual property are granted certain exclusive rights. Some common types of intellectual property rights are copyright, patents, and industrial design rights; and the rights that protect [trademarks](#), trade dress, and in some jurisdictions trade secrets. Intellectual property rights are an intangible [asset](#).

### **Internal audit (1<sup>st</sup> party audit)**

[Audit](#) conducted for an [organisation](#) on its internal [structures](#) and [processes](#).

### **Internal climate**

The combination of an organisation's [management system](#), [organisation culture](#) and [competence base](#) that collectively directs, guides, supports and nurtures the human [behaviour](#) that [manages](#) and participates in [processes](#)

Internal climate is elaborated further in section A.1.1 [Context of a Management System](#).

### **International norms of behaviour**

[Expectations](#) of socially [responsible organisational behaviour](#) derived from customary international law, generally accepted [principles](#) of international law, or intergovernmental agreements that are universally or near universally recognised.

NOTE 1: Intergovernmental agreements include treaties and conventions.

NOTE 2: Although customary international law, generally accepted [principles](#) of international law and intergovernmental agreements are directed primarily at states, they express goals and [principles](#) to which all [organisations](#) can aspire.

NOTE 3: international norms of [behaviour](#) evolve over time.

### **Interorganisational Network**

Consensual [arrangements](#) of relationships between [organisations](#) motivated by an objective to improve [performance](#).

NOTE 1: See also [networks](#).

### **Investigation**

[Process](#) of trying to find out the facts about something, to learn why and how something happened.

### **Just culture**

[Organisation culture](#) that [values](#) the non-punishment of [human errors](#) but recognises that deliberate self-serving [violations](#) of the [management system](#) and other specified [requirements](#) that have been clearly [communicated](#) must be subjected to disciplinary [processes](#) that may result punishment. See also [organisation culture](#).

NOTE 1: A just [organisation culture](#) leads to increased trust, more [effective](#); [communication](#) and reporting leading to more [effective](#) and [efficient](#) functionality of the [organisation](#) through improved cooperation and coordination.

NOTE 2: A just [organisation culture](#) is [ethical](#).

NOTE 2: Punishment [organisation cultures](#) and blame free [organisation cultures](#) are both [ineffective](#).

### **Key performance indicator**

[Performance indicator](#) that is specially selected to indicate a critical [aspect](#) of an [organisation's](#) or [system's performance](#).

NOTE 1: Key [performance](#) indicators are commonly [classified](#) into [leading indicators](#), [coincident indicators](#) and [lagging indicators](#).

## Knowledge

Awareness, [consciousness](#), or familiarity gained by experience or learning of facts, truths, or [principles](#). See also [explicit knowledge](#) and [tacit knowledge](#).

## Lagging indicator

[Indicator](#) that usually changes after the [organisation's](#) or [system's behaviour](#) as a whole changes. See also [leading indicator](#) and [coincident indicator](#).

## Leadership

Capacity to transform [vision](#) into reality.

NOTE 1: Leadership is not an explicit section of this [MSS](#) because although it is critically important to its adoption and successful implementation – it is only its successful implementation that can demonstrate [effective](#) leadership.

## Leading indicator

[Indicator](#) that usually changes before the [organisation's](#) or [system's behaviour](#) as a whole changes. See also [lagging indicator](#) and [coincident indicator](#).

## Lean

Elimination of all non-[value](#)-adding [structures](#) and [processes](#), and [waste](#) from the [organisation](#), [project](#) or activity.

NOTE 1: The concept of 'Lean' can be applied to the overall [organisation](#) including its [supply chain](#) and [delivery chain](#), which forms the overall [value chain](#) delivering the [purpose](#) of the [organisation](#).

NOTE 2: [Redundancy](#), [diversity](#) and [segregation](#) are sometimes necessary to improve [prospect](#) and/or reduce [risk](#) associated with [structures](#) and/or [processes](#) and are therefore value adding.

NOTE 3: [Value](#) should not be added for one [stakeholder](#) at the expense of another.

NOTE 4: Typical types of [waste](#) include:

- Non-[value](#)-adding [structures](#) or [processes](#),
- Over-production,
- Waiting, queueing,
- Avoidable transportation
- Excess inventory
- Motion
- Costs of poor [quality](#) such as: scrap, rework and [re-inspection](#).

## Life cycle

Consecutive and interlinked stages of a [structure](#) or [process](#) from [planning](#), [design](#) and [creation](#) through to demolition or reuse.

## Likelihood

The chance that an [event](#) or situation will happen.

## Maintain

[Process](#) directed at enabling or continuing a condition or situation.

NOTE 1: Maintenance [sustains](#) the [integrity](#) of a [structure](#).

## Malware

[Software](#) that is specifically designed to disrupt or damage a computer [system](#).

## Management

A responsible person's or group's [thinking processes](#) and administrative [processes](#) directed at achieving the [purpose](#), needs, [aspirations](#) and [objectives](#) of an [organisation](#), [project](#) or task through people. See also [integrated management](#) and [top management](#).

NOTE 1: Management thinking and [action](#) may be aided by the use of [management tools](#) and techniques and the input of [experts](#) and specialists.

NOTE 2: A [management process](#) may be [classified](#) as [strategic, tactical](#) or [operational](#), and also as a [normal process](#), [contingency process](#) and change [process](#).

## Management control

Instrument or measure enacted to control personnel [behaviour](#) and [actions](#). See also [prospect and risk controls](#).

NOTE 1: Control may be exercised via administrative [processes](#) or [automatic processes](#) via the implementation of [design](#) features.

NOTE 2: [Management systems](#) are commonly used to consistently [define](#) and exercise [management control](#).

## Management system representative

Person appointed by an [organisation](#) to act as the principal contact and administrative coordinator of the [management system](#).

## Management system

Set of formally [defined](#) intentions, [principles](#), rules and guidance used to [systematically manage](#) an [organisation's structures](#) and [processes](#) to achieve its [objectives](#).

NOTE 1: A [management system](#) typically comprises elements such as [policy statement](#), descriptions of [management](#) approach and philosophy, [management procedure](#), [job descriptions](#), [work instructions](#), [document template\(s\)](#), [forms](#), [schedules](#), [training modules](#), [handbooks](#), [contingency plans](#) and [process definitions](#). See also [Definition of Document Types](#).

NOTE 2: A [management system](#) is normally formally [recorded](#) to facilitate its control and [communication](#). A [management system](#) may be [recorded](#) and [communicated](#) using any suitable [communication](#) media or a mixture of them.

NOTE 3: A [management system](#) may [operate](#) on part or on all of the [organisation's](#) levels as well as [projects](#) and covers management [planning](#), implementation of [management controls](#), [Reactive](#)

[investigation](#) and [planned monitoring](#), and [review](#) and [action](#) to support [continual organizational learning and improvement](#).

NOTE 4: A [management system](#) is used by an [organisation](#) to control and guide its [processes](#) to consistently achieve the [organisation's objectives effectively, efficiently](#) and with [agility](#). It is distinct from other non [management systems](#) within the [organisation](#) that it may direct or guide.

NOTE 5: A [management system](#) may be [integrated](#) to various degrees or [fully Integrated](#).

[Management system](#) is elaborated further in section A.1.1 [Context of a Management System](#).

### **Management tool**

A [structured](#) conceptual methodology for supporting individual or collective [management](#) thinking, problem solving and/or decision [processes](#).

NOTE 1: [Management](#) tools typically include thought [structures](#), [action](#) steps, and representation formats to facilitate [analytical](#) (reductionist) and [synergistic](#) (holistic) [management](#) thought [processes](#). See also section E.1.8 [Management tools and techniques](#) and [Appendix 4: Management Tools](#).

### **Management under uncertainty**

The [management](#) of gain and/or loss involving the [uncertainty](#) of their realization. Refer to [prospect and risk management](#).

### **Manual process**

[Process](#) directly [operated](#) by a person(s).

### **Manufacture**

Making of [goods](#) by manual labour or by machinery, especially on a large scale.

### **Manufactured capital**

Any physical means of production or means of protection beyond that which can be gathered or found directly in nature and often refers to [goods](#) and [infrastructure](#) controlled by an [organisation](#). See also [capital](#).

### **Market**

An actual or virtual place where forces of demand and supply operate, and where purchasers and sellers interact (directly or through intermediaries) to trade goods, services, or contracts or instruments, for money or barter.

### **Marketing**

[Management process](#) that identifies anticipates and satisfies [customer](#) and other [stakeholder requirements](#) profitably or financially in a viable way.

### **Measurement**

[Process](#) to [determine](#) a [value](#). See also [indicator](#).

NOTE 1: Measurement involves the assignment of numerical [values](#) to objects or [events](#) to make definitive comparisons between [observations](#).

NOTE 2: All measurements consist of three parts: magnitude, dimensions (units), and [uncertainty](#).

NOTE 3: The science of measurement is called metrology.

### **Mission**

Succinct description of the [purpose](#) of an [organisation](#) or [project](#), why it exists and what it does to achieve its [vision](#).

NOTE 1: The mission is the means of successfully achieving the [organisation's vision](#).

### **Mitigate**

[Process](#) of making something less severe or [harmful](#).

### **Mode**

A way or manner in which something occurs or is experienced, expressed, or done. See also [configuration](#).

NOTE 1: A mode may be associated with the way a [structure](#) or [process](#) may succeed or fail e.g. [success and failure modes analyses](#).

### **Monitoring**

[Process](#) of determining the status of a [structure](#) or [process](#).

NOTE 1: Monitoring may involve [observation](#), [data](#) collection and checking of the progress and/or [quality](#) of [structures](#) and/or [processes](#).

### **Natural capital**

The stock of natural [ecosystems](#) that yield a flow of valuable [ecosystem goods](#) or [services](#) into the future.

NOTE 1: Since the flow of [services](#) from [ecosystems](#) requires that they function as whole [systems](#), the [structure](#) and [diversity](#) of the [system](#) are important components of natural [capital](#).

### **Near miss**

[Event](#) that occurred in circumstances where there was a [risk](#) of [significant](#) loss that was avoided by good fortune and/or [reactive](#) response.

### **Need**

[Requirement](#) of a [stakeholder](#). See also [expectation](#) and [aspiration](#).

### **Network**

Natural or engineered set of links between living and non-living [entities](#).

NOTE 1: The [purpose](#) of the interconnections may typically include the facilitation of [communication](#) and the transportation of energy and matter.

NOTE 2: See also [interorganisational network](#).

### **Nonconformity**

Non-fulfilment of a [requirement](#). See also [conformity](#), [nonconformity disposition](#) and [observation](#).

### **Nonconformity disposition**

[Action](#) to be taken to deal with an existing [nonconforming structure](#) to resolve the [impact](#) of the [nonconformity](#).

### **Normal process**

[Process](#) forming part of the intended functionality of the [organisation](#) and not a [contingency processes](#). See also [contingency process](#).

NOTE 1: Normal [operational processes](#) include [core processes](#) and [supporting processes](#) and are part of the regular functioning of the [organisation](#).

### **Normal structure**

[Structure](#) that hosts [processes](#) for delivering the primary [purpose](#) of the [organisation](#) or [project](#).

### **Objective**

Desired result to be achieved.

NOTE 1: An objective may be [strategic](#), [tactical](#) or [operational](#).

NOTE 2: An ideal objective is [SMART](#).

### **Observation**

The active acquisition of information from a primary source. See also [nonconformity](#).

NOTE 1: Human observation employs the senses and may also involve the recording of [data](#) via the use of instruments.

### **Occupational stress**

[Harmful](#) physical and emotional responses that occur when the [requirements](#) of the job do not match the capabilities, [resources](#), or needs of the person. See also [stressor](#).

NOTE 1: Job [stress](#) can lead to poor [health](#) and even injury.

NOTE 2: Occupational [stress](#) should not be confused with challenge that energizes people psychologically and physically, and motivates to learn new skills and master occupations. [Stress](#) is always [harmful](#), while challenge can be beneficial.

NOTE 3: [Stress](#) impedes personnel [productivity](#), [creativity](#) and [innovation](#).

### **Operability**

Ability of a [system](#) to function according to [predefined operational requirements](#)

### **Operation**

Task type [processes](#) that are directly focused on delivering the [purpose](#) of an [organisation](#) on a day-to-day basis. See also [strategy](#) and [tactic](#).

### **Operational process**

[Process](#) that implements a [tactical plan](#) and directly delivers a [good](#) or [service](#). See also [strategic process](#) and [tactical process](#).

NOTE 1: [Operational processes](#) include [core processes](#), [supporting processes](#) and [contingency processes](#).

### **Opportunity**

Something or a situation favourable for the attainment of an [objective](#) or a [requirement](#). See also [option](#), [threat](#) and [prospect](#).

NOTE 1: Opportunities are a subset of possibilities.

NOTE 2: Opportunities may be revealed or unrevealed.

NOTE 3: The taking of an opportunity may potentially positively and negatively impact stakeholder needs expectations and aspirations, creating prospects and risks.

### **Option**

Something or a path that has or may be chosen. See also [opportunity](#).

### **Organisation**

Organized body of people with a particular [purpose](#).

NOTE 1: The essence of an organisation is [consciousness](#), [process](#) and [structure](#) and are constantly interacting. See section A.6 [Management principles](#).

NOTE 2: Organisations vary in size, [purpose](#) and the way they interact with other [organisations](#) and individuals.

NOTE 3: Organisations may include sub-organisations including those [created](#) for [projects](#).

### **Organisation culture**

Group shared [values](#) and perceptions of acceptable and unacceptable [behaviours](#). See also [just culture](#) and [organisation morale](#).

NOTE 1: Culture is a socially driven phenomenon where people conform to norms to gain the acceptance of the group and resulting benefits.

NOTE 2: Culture cannot be directly imposed by the leaders of an [organisation](#) – it establishes over time through the influence of a combination of [leadership communication](#), example and compliance with the implemented [management system](#). [Behaviours](#) that are encouraged or enforced over time influence and [create](#) the [culture](#).

NOTE 3: A positive culture [values](#) justice, [responsible](#) questioning and [equitably](#) satisfying [stakeholder needs](#) and [expectations](#).

[Organisation](#) culture is elaborated further in section A.1.1 [Context of a Management System](#).

### **Organisation dynamics**

The total internal human interaction within an [organisation](#) that determines its overall [behaviour](#).

[Organisation](#) dynamics is elaborated further in section A.1.1 [Context of a Management System](#).

### **Organisation governance**

[System](#) by which an [organisation](#) makes and implements decisions in pursuit of its [objectives](#).

NOTE 1: [Organizational governance](#) is implemented through the [organisation's](#) formal [management system](#) and is fully covered by this [MSS](#).

### **Organisation morale**

Overall outlook, attitude, satisfaction and confidence that [employees](#) feel at work. See also [organisation culture](#).

NOTE 1: Morale includes [employee's](#) outlook, optimism, self-concept, and [assured](#) belief in themselves and their [organisation](#), its [mission](#), goals, [defined](#) path, daily decisions, and [employee](#) appreciation. Faith in self and faith in their [organisation](#) are both important factors in positive [employee](#) morale.

### **Organisation size**

Measure of the size of an [organisation](#) based on the number of staff and/or financial [criteria](#).

NOTE 1: Measures of [organisation](#) size are often [defined](#) by legislation applicable to the [economic](#) area in which the [organisation operates](#).

NOTE 2: For applicability of the [MSS](#) clauses the following simple [definition](#) of [organisation](#) size solely in terms of number of staff shall be used – Micro 1 to 9, Small 10 to 49, Medium 50 to 249 and Large 250 upwards.

See section A.5.3 [Organisation size automatic clause exemptions](#):

### **Organogram**

Diagram that shows the structure of an organisation and the relationships and relative ranks of its parts and positions/jobs.

### **Outsource**

Make an [arrangement](#) where an external [organisation](#) performs part of an [organisation's](#) function or [process](#).

### **Overt**

Performed or shown openly – plainly or readily apparent, not secret or hidden. See also [covert](#).

### **Peer review**

[Objectives systematic review](#) conducted by an independent [competent](#) person.

### **Performance**

The degree to which an [organisation](#), [project](#), individual, [structure](#) or [process](#) meets [objectives](#) or [stakeholder's needs, expectations](#) or [requirements](#).



NOTE 1: Performance typically covers [goods](#) and [services quality](#), [commerce](#), [health](#), [safety](#), [environment](#), [security](#) and the care and nurture of personnel.

NOTE 2: Performance may be [measured](#) and expressed as [data](#).

Performance is elaborated further in section A.1.1 [Context of a Management System](#).

### Performance indicator

[Indicator](#) that indicates an [aspect](#) of an [organisation's](#) or [system's performance](#). See also [key performance indicator](#) and section E.4.3.2 [Indicators](#).

### Permit for work

Formal permission and controls, forming part of a [system of work](#), to [safely access](#) an item of equipment or plant to perform a task.

NOTE 1: A permit for work only gives partial protection and generally excludes the work method [hazards](#).

### Permit to work

Formal permission and controls, forming part of a [system of work](#), to [safely](#) carry out a task on an item of equipment or plant with respect to [hazards](#) emanating from the plant or equipment and the work method..

NOTE 1: Permits typically cover [hazardous](#) tasks such as hot working, confined spaces, electrical work etc.

### Personal protective equipment PPE

Protective clothing, helmets, goggles, or other garments or equipment [designed](#) to protect the wearer's body from injury.

### Plan

Detailed formulation of a [program](#) to achieve an [objective](#).

### Plan-Do-Check-Act

Iterative four-step [management](#) method used to [systematically manage organisations](#) to control and [continually](#) improve [structures](#), [processes](#), [goods](#) and [services](#). Refer to section A.1.2 [Plan-Do-Check-Act](#).

### Planned monitoring

[Monitoring](#) conducted [systematically](#) according to a [management policy](#) and/or [schedule](#).

### Planned monitoring findings

Results of the evaluation of collected evidence against [monitoring criteria](#).

### Policy

[Organisation's](#) formally [defined](#) intentions and direction [defined](#) by its [top management](#).

**Pollution**

Contaminants that have been introduced into an [environment](#) that causes adverse change.

NOTE 1: Pollution can take the form of chemical substances or energy, such as noise, heat or light.

NOTE 2: The components of pollution can be either foreign matter or energies or naturally occurring contaminants.

NOTE: 3 Pollution may be prevented or reduced by source reduction or elimination, [structure](#) or [process](#) change, [efficient](#) use of matter and energy including substitution, reuse, recovery, recycling, reclamation and treatment.

**Post**

A [defined](#) appointed position within an [organisation](#) or [project](#). See also [role](#).

**Practicable**

Capable of being effected, done, or put into practice successfully – feasible.

**Precautionary principle**

[Principle](#) that the introduction of a new [structure](#) or [process](#) whose ultimate effects are disputed or unknown should be resisted.

NOTE 1: The [principle](#) is applicable to proposals to [create](#) novel [structures](#) and [processes](#) where there is little or no historical [data](#) or experience e.g. creating genetically modified organisms and food. Because the situation is novel it is not possible to conduct a meaningful [prospect and risk assessment](#) or even bound the [risk](#)

**Preventive action**

[Action](#) taken to reduce the [likelihood](#) of occurrence or reoccurrence of a [nonconformity](#), undesired [event](#) or situation. See also [corrective action](#).

Refer to section E.9.2 [Corrective and preventive action](#).

**Privacy**

State of being free from unsanctioned intrusion.

**Productivity**

[Measure](#) of output per unit of input.

NOTE 1: Inputs include labour and [capital](#), while output is typically measured in revenues and other gross national product components such as business inventories.

**Principle**

Fundamental truth or proposition that serves as the foundation for a [system](#) of belief or [behaviour](#) or for a chain of reasoning. See also section A.6 [Management Principles](#).

**Proactive**

Creating or controlling a situation by causing something to happen rather than responding to it after it has happened. See also [reactive](#).

**Procedure**

Specified way to conduct a [process](#). See also [management procedure](#).

NOTE 1: Procedures may be [documented](#) or [undocumented](#).

**Process**

Activity or set of linked activities that transforms inputs into outputs. See also [normal process core process](#), [supporting process](#), [contingency process](#), [automatic process](#) and [manual process](#).

NOTE 1: Process transformation may take place within people, [data](#), matter, energy, [environment](#) etc.

NOTE 2: [Processes](#) may be [classified](#) in a number of different ways that include:

- [Strategic, tactical](#) and [operational process](#),
- [Automatic process](#) and [manual process](#),
- [Core process](#), [supporting process](#) and [contingency process](#).

Process is elaborated further in section A.1.1 [Context of a Management System](#).

**Process variation**

Variation that occurs when there are differences in multiple instances of the same [process](#).

**Program**

[Planned](#) series of steps, [projects](#) or activities to be carried out.

**Project**

[Planned](#) piece of work that has a specific [purpose](#) and is temporary i.e. has a beginning and end.

NOTE: Projects may be conducted internally or externally to the [organisation](#).

**Prospect**

Combination of the potential gain and the [likelihood](#) of its realization. See also [risk, prospect and risk](#).

NOTE 1: Gain may be financial or any other perceived benefit.

NOTE 2: Prospect is conceptually negative [risk](#). The preferred term is 'prospect'.

**Prospect and risk**

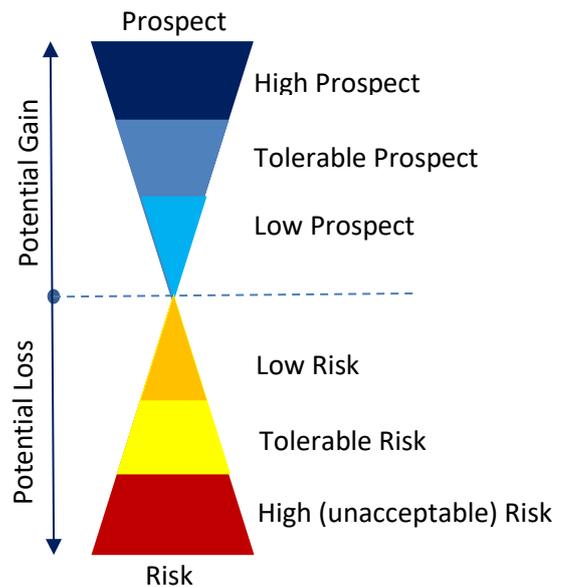
Respective combinations of positive and negative consequences of a potential [event](#) or outcome and the associated [likelihood](#) of occurring.

NOTE 1: [Prospect](#) and [risk](#) are [stakeholder](#) judgements or perceptions of whether [value](#) is [likely](#) to be [created](#) or lost and may vary according to the [stakeholder](#) and are therefore [relativistic](#) and may even conflict with other [stakeholders](#).

NOTE 2: [Prospect](#) and [risk](#) may be understood conceptually as the mirror of each other.

NOTE 3: [Prospect](#) and [risk](#) may coexist, may exist in close physical or virtual proximity and may be mutually dependent.

NOTE 4: [Prospect](#) and [risk](#) may be space or time dependent e.g. during a scenario or during the changes of the seasons etc.



**Figure 29: Prospect and Risk**

NOTE 5: Estimates of [prospect or risk](#) may be expressed qualitatively or quantitatively. For a qualitative example, refer to [Appendix 3: Prospect and Risk Rating System Example](#).

NOTE 6: The aggregation of [prospect](#) and [risk](#) is generally not meaningful and should only be done if the respective profiles are similar and expressed in the same units.

NOTE 7: [High prospect](#) combined with [low risk](#) is the most desirable.

### Prospect and/or risk analysis and synthesis

[Process](#) used to [identify](#) and assess factors that may jeopardize the [likelihood](#) of an [organisation](#), [project](#) or task satisfying the [needs](#) and [expectations](#) of [stakeholders](#) while making the best use of [resources](#).

NOTE 1: [Prospect and/or risk analysis](#) normally comprises of two stages, [identification](#) followed by assessment, each employing different methodologies.

### Prospect and/or risk assessment

[Systematic process](#) of evaluating the potential [prospects and/or risks](#) associated with an [objective](#), activity or undertaking.

NOTE 1: [Prospects and/or risks](#) assessment is conducted following [aspect and impact identification processes](#).

### Prospect and/or risk barrier

A physical or virtual barrier intended to promote, prevent or control [prospect and/or risk](#).

NOTE 1: [Diverse](#) barrier types used together decreases the chance of common [mode failure](#) and can also compensate for each other's weaknesses. Refer to [defense in depth](#).

**Prospect and/or risk based**

Decision, [structure](#) or [process](#) that is based on the output from a reliable [systematic prospect and/or risk assessment](#). See also [prospect and/or risk informed](#), [evidence informed](#), [evidence based](#) and [due diligence](#).

**Prospect and/or risk controls**

Controls used to increase [prospect](#) and/or decrease [risk](#).

NOTE 1: [Prospect and risk](#) controls may be engineered or administrative and include [management controls](#).

**Prospect and/or risk improvement**

Increasing [prospect](#) and/or decreasing [risk](#). See also [acceptable prospect](#) and [acceptable risk](#).

**Prospect and/or risk indicator**

[Measure](#) used in [management](#) to indicate the level of [prospect](#) or [risk](#) of a [structure](#) or [process](#). See also [Appendix 4: 'Prospect Indicators'](#) and ['Risk Indicators'](#), and section E.4.3.2 [Indicators](#).

**Prospect and/or risk informed**

Decision, [structure](#) or [process](#) that takes account of [prospect and/or risk data](#). See also [prospect and/or risk based](#), [evidence based](#), [evidence informed](#) and [due diligence](#).

**Prospect and/or risk informed monitoring**

[Monitoring planning](#) that is [Prospect and/or risk informed](#).

**Prospect and/or risk rating**

Simple alpha or numeric scale used as a [measure](#) to represent the [likelihood](#) and [impact](#) components of gain and/or loss, and [prospect and risk](#). Refer to [Appendix 3: Prospect and Risk Rating System Example](#).

**Prospect and/or risk register**

[Schedule](#) used to [record](#) identified [prospects and/or risks](#) and associated [data](#).

**Prospect and risk management**

[Management](#) involving [uncertainty](#).

NOTE 1: [Prospect](#) and [risk](#) management is sometimes known as [management under uncertainty](#) and embraces the [management](#) of [prospect and risk](#).

**Prospect and/or risk: controlled**

The [prospect and/or risk](#) remaining after [prospect and/or risk controls](#) have been applied. See also [uncontrolled prospect/or risk](#) and [residual prospect and/or risk](#).

NOTE 1: If the [prospect and/or risk controls](#) fail the [prospect and/or risk](#) becomes the [uncontrolled prospect and/or risk](#) respectively, i.e. the situation without any [prospect and/or risk controls](#) applied. It is therefore important that [prospect and/or risk controls](#) receive appropriate [planned monitoring](#) which take into account their contribution to [prospect and/or risk improvement](#) and the [uncontrolled prospect and/or risk](#).

**Prospect and/or risk: residual**

The [prospect and/or risk](#) remaining after [prospect and/or risk controls](#) have been applied and/or the [uncontrolled prospects and risks](#) been assessed as acceptable and not requiring additional [prospect or risk controls](#).

**Prospect and/or risk: uncontrolled**

The [prospect](#) existing before [prospect controls](#) are applied. See also [controlled prospect](#), [controlled risk](#) and [uncontrolled risk](#).

**Prospect: acceptable**

A [prospect](#) that is either a [high prospect](#) or a [tolerable prospect](#). See also [acceptable risk](#).

**Prospect: high**

[Prospect](#) that [significantly](#) exceeds a [tolerable prospect](#).

NOTE 1: A high [prospect](#) is the ideal but may not be realizable because of [market](#) competition or [stakeholder](#) resistance.

**Prospect: tolerable**

[Prospect](#) that is sufficient to contribute net [value](#) to the [organisation](#) or [project](#) directly or in combination with other [prospects](#). See also [tolerable risk](#).

**Prospect: unacceptable**

[Prospect](#) that is less than [tolerable prospect](#) and fails to make a net contribution of [value](#) to the [organisation](#) or [project](#).

NOTE 1: Unacceptable [prospects](#) collectively lead to an [organisation](#) or [project](#) being [unsustainable](#).

**Purpose**

Reason for something existing.

NOTE 1: [Structures](#) and [processes](#) have a purpose and it is its fulfilment that can add [value](#) individually and collectively with respect to [stakeholders](#).

NOTE 2: Purpose may be time limited.

**Quality**

Degree that the totality of the characteristics of a [structure](#) or [process](#) satisfies the [needs](#) and [expectations](#) of a [customer](#) or other [stakeholder](#).

NOTE 1: Quality may be [required](#) to be delivered continuously, [continually](#) or occasionally depending on the [purpose](#) of the [organisation](#), [good](#) or [service](#).

NOTE 2: [Prospect and/or risk controls](#) may be [required](#) to [assure](#) the continuity of quality.

NOTE 3: [Structures](#) and [processes](#) include [goods](#) and [services](#) supplied internally or externally.

### **Reactive**

Responding to an [event](#), problem or situation when it occurs instead of doing something to prevent them. See also [proactive](#).

### **Reactive investigation**

[Investigation](#) triggered by an [event](#), problem or situation with the [objective](#) of understanding why and what happened to correct the situation and prevent reoccurrence if [practicable](#).

### **Reconcile**

Cause to coexist in harmony, make or show to be compatible.

### **Record**

Physical or virtual data constituting a piece of evidence about the past.

NOTE 1: Records may relate to [structures](#), [processes](#) and [events](#) within or related to the [organisation](#). See section E.4.2.9 [Records](#).

### **Redundancy**

Replication of [structures](#) and [processes](#) to increase [prospect](#) or reduce [risk](#).

### **Relativistic**

Varying according to the observer.

NOTE: Relativistic implies that characteristics will not be universal or absolute and may even conflict e.g. [needs](#), [expectations](#), judgements etc. Consequently, [prospect](#) and [risk](#) are relativistic according to the [stakeholder](#).

### **Reliability**

Ability of a [structure](#) or [process](#) to perform as required under stated conditions for a specified time.

### **Remanufacture**

Refurbish a used product by renovating and reassembling its components.

### **Repair**

Restoration of something that is broken, damaged or not working correctly, back into good condition or able to work again.

### **Repairability**

The degree that something is capable of being [repaired](#).

**Requirement**

Stated, implied or mandatory [need](#) or [expectation](#). See also [conformity](#) and [nonconformity](#)

**Resilience**

Ability of an [organisation](#), [structure](#) or [process](#) to effectively and efficiently respond to and/or quickly recover from an [event](#) or change in its internal or external [environment](#).

**Responsibility**

A [duty](#) or obligation to satisfactorily perform and/or comply with [defined requirements](#). See also [authority](#), [accountability](#), [delegation](#) and section E.2.4.3 [Appointment](#).

NOTE 1: [Requirements](#) may typically be defined within a [management system](#), [contract](#) or legislation.

**Resource**

Stock or supply of personnel, money, [data](#), energy, materials, [suppliers](#), and other [assets](#) that can be drawn on by a person or [organisation](#) to function [effectively](#). See also [capital](#) and [waste](#).

**Review**

Individually or collectively formally examine or assess a [structure](#) or [process](#) with the possibility or intention of instituting change if necessary.

**Risk**

Combination of the potential loss and the [likelihood](#) of its realization. See also [prospect](#), [prospect and risk](#), and [precautionary principle](#).

NOTE 1: Negative consequences may include any types of actual or perceived loss or realised [threat](#) such as [harm](#) to personnel, the [environment](#), [commerce](#), [data](#), [suppliers](#) or any other [asset structure](#) or [process](#).

NOTE 2: Risk is conceptually negative [prospect](#).

NOTE 3: Loss is that perceived by the [stakeholder](#).

**Risk assessment**

[Process](#) of evaluating the risk(s) arising from a [hazard\(s\)](#) taking into account the adequacy of any existing controls and deciding whether or not the risk(s) is acceptable.

**Risk management**

Refer to [prospect and risk management](#).

**Risk: acceptable**

A risk that is either a [low risk](#) or a [tolerable risk](#). See also [acceptable prospect](#).

**Risk: low**

Acceptable [risk](#) is a range of [risk](#) extending from a negligible amount of [risk](#) and including a low amount of [risk](#).

**Risk: tolerable**

Tolerable [risk](#) is one that exceeds a broadly acceptable [risk](#), is less than an [unacceptable risk](#) and is undertaken only if a benefit is desired. The [risk](#) is tolerable only if [risk](#) reduction is im[practicable](#) or if its cost is grossly disproportionate to the [risk improvement](#) gained i.e. the [risk](#) must be reduced “as far as reasonably [practicable](#)” ([ALARP](#)). See also [tolerable prospect](#).

**Risk: unacceptable**

Unacceptable [risk](#) is one which cannot be justified save in extraordinary circumstances. See also [unacceptable prospect](#).

**Robust**

Performs well not only under ordinary [conditions](#) but also under unusual [conditions](#) that challenge its [design](#) assumptions.

**Role**

A [defined](#) personnel [responsibility](#) or function within an [organisation](#) or [project](#) not directly linked to the [organisation structure](#). See also [post](#).

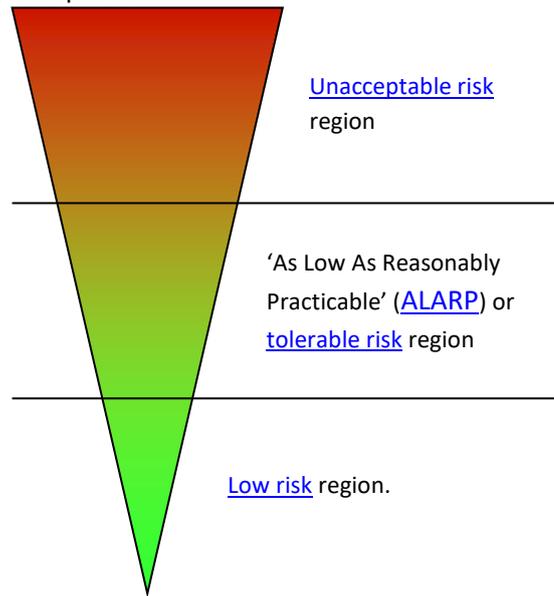
NOTE 1: A personnel role is generally additional to appointment to a post e.g. appointment as a first aider or a fire warden.

**Root cause**

[Atomic](#) initiating or contributory cause of a causal chain that leads to an [event](#), outcome or effect of interest to a [stakeholder](#).

NOTE 1: Commonly, root cause is used to describe a point in the causal chain where an intervention could reasonably be implemented to change an undesirable outcome.

NOTE 2: A root cause (e.g. inadequate [training](#)) may be shared by several outcomes of interest to a [stakeholder](#). Hence, preventive [action](#) is often initiated in parallel with [corrective action](#).



**Figure 30: Risk Acceptance**

**Root cause classification**

The [classifying](#) of [root causes](#) according to the [aspects](#) that affect or influence the functionality of the [organisation](#).

NOTE 1: Other dimensions of [classification](#) may include the reason the [management system](#) was not followed e.g. [human error](#) or [human violation](#) and their sub [classifications](#).

**Royalty free**

The right to use copyrighted material or [intellectual property](#) without the need to pay royalties or license fees for each use or per volume sold, or some time period of use or sales.

**Safety**

The state of not being [dangerous](#) or [harmful](#) or where the risk of [harm](#) is deemed not to be [significant](#).

**Security**

The degree of resistance to, or protection from, [harm](#).

NOTE 1: Security applies to any vulnerable and [valuable asset](#), such as a person, dwelling, community, nation, or [organisation](#).

NOTE 2: Loss of [data](#) security may occur via loss of [confidentiality](#), [integrity](#), and/or [availability](#).

**Segregation**

[Action](#) or state of setting someone or something apart from others.

NOTE 1: May be adopted to increase [prospect](#) and/or reduce [risk](#).

**Service**

[Action](#) of helping or doing work for someone.

NOTE 1: Service is dynamic and delivered over a period of time unlike [goods](#) that are [structural](#) and may be transferred instantly.

NOTE 2: A service may be started, stopped or continued but once supplied a defective service cannot be returned like [goods](#) – refer to [good](#).

**Service mark**

A [trademark](#) that is used in connection with services.

NOTE 1: [Organisations](#) use service marks to identify their [services](#) and distinguish them from other [services](#) provided in the same field.

NOTE 2: [Service](#) marks consist of letters, words, symbols, and other devices that help inform consumers about the origin or source of a particular [service](#).

**Significant**

Level [likely](#) to [impact](#) a need, [expectation](#), [aspiration](#) or [objective](#) important to a [stakeholder](#). See also [highly significant](#)

### Social capital

[Value](#) added to various [aspects](#) of an [organisation](#) by human relationships, and is generally referred to as the [value](#) of connections within and between social [networks](#). See also [capital](#).

### Social dialogue

Negotiation, consultation or exchange of information between or among representatives of governments, employers and [workers](#), on matters of common interest relating to [economic](#) and social policy.

### Social responsibility

[Responsibility](#) of an [organisation](#) for the [impacts](#) of its decisions, [structures](#) and [processes](#) on society and the [environment](#) through [transparent](#) and [ethical behaviours](#) that:

- a) Contributes to [sustainable development](#), including [health](#) and [welfare](#) of society,
- b) Takes into account the [needs](#) and [expectations](#) of [stakeholders](#),
- c) Is in compliance with applicable legislation and consistent with [international norms of behaviour](#),
- d) Is integrated throughout the [organisation](#) and practised in its relationships.

### Software

Programs and other operating [data](#) used by a computer.

### Sphere of influence

Range/extent of political, [contractual](#), [economic](#) or other relationships through which an [organisation](#) has the ability to affect the decisions or activities of individuals or [organisations](#).

NOTE 1: The ability to influence does not, in itself, imply a [responsibility](#) to exercise influence.

### Stakeholder

Any individual, group or [organisation](#) that can affect, be affected by or believe itself to be affected by the [organisation](#)'s existence, [assets](#) or activities. See also [Conflicting stakeholder](#).

NOTE 1: Typically, Internal stakeholders comprise [employees](#), managers and directors and external stakeholders comprise contractors, neighbours, competitors, shareholders, bankers, partners, insurers, pressure groups, trade unions, society, government, regulators, [suppliers](#) and [customers](#). A stakeholder may exist in more than one of these [classifications](#) and therefore may simultaneously be both an internal and external [stakeholder](#).

NOTE 2: A stakeholder may exist globally and may even be as yet unborn. The interests of the latter are usually shared by the living stakeholders and exercise power on their behalf.

NOTE 3: The nature of the [organisation's](#) relationships with its [stakeholders](#) varies according to each [stakeholder's needs](#), [expectations](#), [aspirations](#), the potential for conflicts of interest, the ability to exercise power, their awareness and ability to understand the [organisation's operations](#) and their [values](#) and morality.

NOTE 4: Stakeholders, each from their own perspective, may be [impacted](#) by the [organisation's structures](#) and its [processes](#) including their benefits and [risks](#).

Stakeholders are elaborated further in section A.1.1 [Context of a Management System](#).

### **Stakeholder engagement**

Activity undertaken to create [opportunities](#) for dialogue between an [organisation](#) and one or more of its [stakeholders](#), with the aim of improving the making of [evidence informed](#) and [evidence based](#) decisions.

### **Statistical process control**

Method of [quality](#) control that uses statistical methods.

NOTE 1: [SPC](#) is applied to monitor and control a [process](#) to ensure that it [operates](#) at its full potential such that as much [good](#) is made as possible with a minimum (if not an elimination) of [waste](#).

NOTE 2: [SPC](#) can be applied to any repetitive [process](#) where the “conforming [good](#)” ([good](#) meeting specifications) output can be measured. [SPC](#) is typically applied in mass manufacturing.

### **Strategic process**

[Processes](#) that establish a [strategy](#). See also [tactical process](#) and [operational process](#).

NOTE 1: The objective of [strategic processes](#) is to [determine](#) which potential [organisation purposes](#) are worth pursuing and capable of being accomplished.

### **Strategy**

A logically [structured plan](#) or method for achieving long-term [objectives](#). See also [strategic process](#)

NOTE 1: Strategy and policies are needed to ensure that the [organisation's purpose](#), [vision](#), [mission](#) and [values](#) are accepted and supported by the [stakeholders](#).

### **Stress**

Adverse reaction people have to excessive pressures or other types of demand placed on them.

NOTE 1: Stress is caused by the overloading of the nervous [system](#) and its inability to recover. It has an adverse effect on human [consciousness](#)

### **Stressor**

Physical, psychological, or social force that puts real or perceived demands on the body, emotions, mind, or spirit of an individual. See also [occupational stress](#).

### **Structure**

Time independent [entity](#) made up of elements.

NOTE 1: [Structures](#) may be natural or human-made and comprises one or more of people, [data](#), matter, energy, [environment](#) etc. and are applicable to [organisations](#) and [projects](#).

NOTE 2: [Structures](#) host [processes](#) (dynamics).

Structure is elaborated further in section A.1.1 [Context of a Management System](#).

### **Structure and/or process definition**

Description of a [structure](#) and associated [process](#) containing all [significant data](#) regarding its [life cycle](#) to satisfy the [needs](#) and [expectations](#) of [stakeholders](#). Refer to section E.7.1.1 [Structure and process definition](#).

### **Structure and/or process owner**

Formally appointed person [responsible](#) for the [operation](#), [maintenance](#) and change of a [structure](#) and/or [process](#).

### **Social responsibility**

Characteristic of an individual or [organisation](#) that ensures that all [processes](#) are conducted [ethically](#) with respect to society as a whole. See also [commercial responsibility](#).

NOTE 1: The focus of social [responsibility](#) embraces all [stakeholders'](#) [needs](#) and [expectations](#) that may be [impacted](#) by the [organisation](#) and is a broader [responsibility](#) than [commercial responsibility](#).

### **Source of benefit and/or harm**

Something with the potential to cause an outcome which is desirable and/or undesirable with respect to a [stakeholder](#). See also [hazard](#).

### **Success**

An outcome which satisfies a [stakeholder](#). See also [failure](#).

### **Supplier**

Individual or [organisation](#) that provides a [good](#) and/or a [service](#).

### **Supply chain**

Sequence of parties and [processes](#) that provide [goods](#) and/or a [services](#) to the [organisation](#). See also [delivery chain](#) and [value chain](#).

### **Supporting process**

[Process](#) that supports an [organisation's core processes](#) and does not directly deliver the [organisation's purpose](#) e.g. the delivery of [goods](#) and [services](#).

### **Sustainability**

The ability to endure.

### **Sustainable development**

Development that meets the [needs](#) of the present without compromising the ability of future generations to meet their own [needs](#).

NOTE 1: [Sustainable](#) development is about integrating the goals of high [quality](#) of life, [health](#) and prosperity with social justice and maintaining the Earth's capacity to support life in all of its diversity. These social, [economic](#) and [environmental](#) goals are interdependent and mutually reinforcing.

[Sustainable](#) development can be treated as a way of expressing the broader expectations of society as a whole and is achieved by taking an [integrated approach to management](#).

### **Synergy**

The interaction or cooperation of two or more [entities](#) ([structures](#) and/or [processes](#)) to produce a combined effect greater than the sum of their separate effects.

### **Synthesis**

Combining of the constituent elements of separate material or abstract [entities](#) into a single or unified [entity](#). See also [analysis](#).

### **System**

Set of elements forming a connected whole.

NOTE 1: A system is [structural](#) in nature.

### **System of work**

Component of a [management system](#) that [defines](#) how a [process](#) shall be conducted or specific [conditions](#) that restrict permitted activity.

[Permits for work](#) or [permits to work](#) are common instruments of [systems of work](#) commonly referred to as safe [systems of work](#).

### **Systematic**

Performed according to a fixed [plan](#), defined methodology or [system](#).

### **Tacit knowledge**

[Knowledge](#) that is difficult to transfer to another person by means of writing it down or verbalizing. See also [explicit knowledge](#)

NOTE 1: For example, stating to someone that London is in the United Kingdom is a piece of [explicit knowledge](#) that can be written down, transmitted, and understood by a recipient. However, the ability to speak a language, use algebra, or [design](#) and use complex equipment requires all sorts of [knowledge](#) that is not always known explicitly, even by [expert](#) practitioners, and which is difficult to explicitly transfer to users.

### **Tactical process**

[Processes](#) that directly implement [strategy](#), [planned](#) and ad hoc activities meant to deal with the demands of the moment, and to move from one milestone to other in pursuit of the overall goal(s). See also [strategic process](#) and [operational process](#).

NOTE 1: In an [organisation](#), [strategy](#) is generally decided by the board of directors, and [tactics](#) by the department heads for implementation by the junior managers and [employees](#) via [operational processes](#).

### **Tactic**

See [tactical process](#).

**Taxonomy**

Hierarchical collection of categories used to organize information.

**Tender**

Written or formal offer to supply [goods](#) or [services](#) for an agreed price.

**Test**

A [process](#) intended to establish the [quality](#), performance, or reliability of a [structure](#) or [process](#), especially before it is taken into widespread use.

**Teleworking**

Work flexibility arrangement under which an [employee](#) performs the [duties](#) and responsibilities of a post or role, from an approved worksite other than the location from which the [employee](#) would otherwise work.

NOTE 1: Teleworking allows an [employee](#) to perform work, during any part of regular paid hours at an approved alternative worksite (e.g. home or telework center). It excludes any part of work done while on official travel or mobile work.

NOTE 2: Teleworking is facilitated by the use of home computers, telephones, etc., to enable a person to work from home while maintaining contact with colleagues, customers, or a central office.

**Thinking process**

[Process](#) using the [conscious](#) mind to produce ideas, decisions, and memories.

**Threat**

Something or a situation that has the intention of causing [harm](#) or behaving in a way that could cause harm. See also [hazard](#) and [opportunity](#).

NOTE 1: Threats may include competitors who may have conflicting objectives. More malicious threats may come from individuals or organisations with fundamentalist ideologies or from people who are mentally deranged.

NOTE 2: Threats normally emanate from an intelligent conscious source while hazards are passive and non-reacting to defenses.

**Top management**

Person(s) with the [responsibility](#) for directing and guiding an [organisation](#) at the highest [management](#) level.

**Traceability**

The ability to [verify](#) the history, location, or application of an item by means of documented [recorded identification](#).

**Trademark**

Symbol, word, or words legally registered or established by use as representing a company or product. See also [service mark](#).

**Training**

Acquisition of [knowledge](#), skills, and [competencies](#) as a result of the teaching of vocational or practical skills and [knowledge](#) that relate to specific [competencies](#). See also [education](#).

**Transparency**

Situation where [commercial](#) and other activities are done openly without secrets, so that people can trust that they are fair and honest.

**Uncertainty**

State, even partial, of deficiency of information related to, understanding or [knowledge](#) of, an [event](#), its consequence, or [likelihood](#).

**Validation**

Formal [assurance processes](#) that provide the [required](#) level of confidence, through the provision of objective evidence, that a [system](#), [good](#) or [service](#) delivers or is capable of delivering its intended [purpose](#) or functionality. See also [verification](#)

NOTE 1: Validation is about whether the characteristics of something deliver its [purpose](#) when [required](#). Failing to [effectively validate](#) something increases the [likelihood](#) that its [structure](#) and/or functionality will not align with what was intended.

NOTE 2: The [process](#) of validation can be carried out under realistic use [conditions](#) or within a simulated use [environment](#).

**Value**

Regard that something is held to deserve; the importance or preciousness of something, general [principles](#) and beliefs that are important to an individual or group.

NOTE 1: Value can be positive or negative, and can motivate and demotivate organisation behaviours.

NOTE 2: Values may be held individually and collectively and affect decisions and [behaviour](#) and is an element of [organisation culture](#) and [stakeholder](#) culture.

NOTE 3: The general value of a [good](#) or [service](#) is that which is perceived by a consensus of the relevant [stakeholders](#) but may also be [defined](#) relative to an individual.

NOTE 4: Organisation objectives need to embrace creating value and retaining value in a coherent joined up way.

**Value chain**

Entire sequence of activities or parties that provide or receive [value](#) in the form of [goods](#) or [services](#). See also [lean](#), [supply chain](#) and [delivery chain](#).

NOTE 1: Parties that provide [value](#) include [suppliers](#), [outsourced workers](#), contractors and others.

NOTE 2: Parties that receive [value](#) include [customers](#) and other [stakeholders](#).

**Vector**

Quantity that has magnitude and direction.

NOTE 1: It is commonly represented by a directed line segment whose length represents the magnitude and whose orientation in space represents the direction e.g. [prospect or risk](#). Refer to [Appendix 3.2 Prospect and risk rating matrices and scales](#).

### Verification

Formal [process](#) of confirming that [data](#) or an assertion is true through the provision of objective evidence. See also [Validation](#).

NOTE 1: Verification is about whether [data](#) or stated information is true or false. Failing to [effectively verify](#) something increases the [likelihood](#) that it is false or untrue.

NOTE 2: Examples of verification may typically include:

- Confirming whether or not a [good](#) or [service](#) complies with a regulation, [requirement](#), specification, or imposed [condition](#),
- Confirming [recorded data](#) corresponds to the actual [test measurements](#) made,
- Checking that a [design](#) brief accurately reflects the expressed [needs](#) and [expectations](#) of a [customer](#) or other [stakeholder](#),
- Confirming whether or not an applicant for a job or for a [service](#) such as a loan is providing a true statement of fact,
- Checking whether a person has the [required certificated competences](#) to perform or participate in a [process](#).

NOTE 3: [Failure](#) of verification [processes](#) may [impact](#) the outcome of [validation processes](#) by failing to [identify](#) inputs that are not true.

### Vision

Outline of what the [organisation](#) wants to be, or how it wants the world in which it [operates](#) to be.

NOTE 1: It is a long-term view and is focused on the future.

NOTE 2: It can be emotive and a source of inspiration.

### Waste

[Resource](#) that does not become, contribute to or support the desired output of a [process](#).

NOTE 1: Waste is reduced by making [structures](#) and [processes](#) more [efficient](#) by improving their [design](#) – refer to [lean](#).

### Waste controls hierarchy

A priority of controls that are applied to minimize [waste](#) generation and its subsequent [impacts](#).

NOTE 1: The aim is to extract the maximum practical benefits from [goods](#) and to generate the minimum amount of [waste](#).

NOTE 2: The proper application of a [waste controls hierarchy](#) helps to prevent [emissions](#) of greenhouse gases, reduces pollutants, saves energy, conserves resources, create jobs and stimulate the development of green technologies.

See also section E.5.6 [Waste and emissions](#).

### **Welfare**

Provision of structures and processes to support human well-being.

NOTE 1: Basic welfare provisions typically include toilets, places to eat, washing [facilities](#), storage for personal possessions and spare clothing etc.

NOTE 2: Mental welfare is nurtured and promoted by guarding against personnel [stressors](#) caused by the design and operation of the work [environment](#), [structures](#) and [processes](#).

### **Whistleblowing**

[Process](#) of making a disclosure of a suspected wrongdoing in the interests of [stakeholders](#).

### **Worker**

Person who performs work, whether an [employee](#) or someone who is self-employed.

### **Workplace**

Physical location(s) in which work is conducted under the control of the [organisation](#).

NOTE 1: Critical characteristics of the workplace [environment](#) include lighting, temperature, humidity, noise, weather, cleanliness, [welfare arrangements](#), other [workers](#), general public, [access](#) to support and information.

## Bibliography

See also [Appendix 9: Comparison with other Standards](#).

- 1 ISO/IEC 2012 Annex SL (normative) Proposals for management system standards, Appendix 3.
- 2 ISO9001:2015 CD Quality management systems – 10 September 2013.
- 3 ISO14001:2015 CD2 Environmental management systems – 22 October 2013.
- 4 BS OHSAS 18001:2007 Occupational health and safety management systems.
- 5 ISO 26000:2010 – Guidance on social responsibility.
- 6 ISO/IEC 27001 – Information security management.
- 7 ISO/IEC 27002 – Information technology – Security techniques – Code of practice for information security controls
- 8 ISO 31000:2009 Risk management — Principles and guidelines.
- 9 ISO 55001:2014 - Asset management - Management systems – Requirements
- 10 PAS99:2012 Publicly available specification – Specification of common management system requirements as a framework for integration.

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See also '[Definitions](#)' section.

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## Revision Schedule

| Revision   | Change   |
|------------|--|
| 2014       | Original issue.  |
| 2023-01-01 | Definitions extended to include: repair, repairability.<br><a href="#">Management Principles</a> removed. Instead, they were extended and defined in the IMC document: Integrated Management Definition and its Elaboration. |
|            |  |
|            |  |

## Appendices

[Appendix 1: Compliance Scoring System](#)

[Appendix 2: Classification of Structures and Processes Example](#)

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## Appendix 1: Compliance Scoring System

### 1.1 Compliance factor

For each audited [requirement](#) in the standard, that is applicable to the [organisation](#), provide a score from 0 to 1 based on Table 3: Compliance factor.

A proportion of the factor can be allocated if the [condition](#) is partially satisfied in situations where the [condition](#) is partially satisfied across some [aspects](#) of the [organisation](#) or perhaps only for some [aspects](#) of [performance](#) such as [health](#) and [safety](#) or [environment](#) etc. For example, a fully satisfied level could result in a score of 0.8 if fully satisfied but say 0.77 if it was partially satisfied. No credit can be given above the partially satisfied level.

The highest-level score that can be given is where part or all of a [defined](#) degree of compliance is satisfied and every lower [condition](#) is satisfied.

| Score | Observed Progress  |
|-------|--|
| 1     | For a period of two years, <a href="#">monitoring</a> has demonstrated full compliance with <a href="#">management arrangements</a> and there has been no reports of undesired <a href="#">events</a> (including <a href="#">near misses</a> ) related to the 'issue'.   |
| 0.9   | Experience is demonstrating that the 'issue' formal <a href="#">arrangements</a> are delivering <a href="#">effective</a> <a href="#">efficient</a> and <a href="#">agile processes</a> . The <a href="#">management</a> of the 'issue' is fully integrated with the <a href="#">management</a> of other interacting issues. |
| 0.8   | The 'issue' controls have been formally implemented in all respects including confirmation of related personnel <a href="#">competencies</a> .   |
| 0.7   | The <a href="#">management system</a> containing the 'issue' controls has been formally issued.  |
| 0.6   | Staff has been briefed on the new or changed 'issue' controls.   |
| 0.5   | The 'issue' controls and/or guidance form part of a draft <a href="#">management system</a> and appear to be suitable and sufficient.  |
| 0.4   | <a href="#">Planning</a> for the 'issue' has been completed and controls agreed.   |
| 0.3   | <a href="#">Planning</a> of the 'issue' is in progress.  |
| 0.2   | <a href="#">Resource</a> has been allocated for <a href="#">planning</a> to address the 'issue' but has not yet started.   |
| 0.1   | <a href="#">Responsible</a> manager is aware of the relevance of the 'issue' but <a href="#">resource</a> has so far not been allocated to <a href="#">plan</a> to address it.   |
| 0     | <a href="#">Responsible</a> manager has no awareness of the relevance of the 'issue' to the <a href="#">organisation</a>   |

Table 3: Compliance factor

### 1.2 Compliance score

The compliance score (a number between nought and one) is calculated by summing the scores for each of the 12 elements of the standard and dividing by 12. Each element score is obtained by summing the subordinate factors awarded divided by the number of factors. Further subsections are calculated in the same way. Refer to Figure 31: Compliance Score Computation Example.

### 1.3 Minimum and maximum scores

The maximum and minimum scores are simply the maximum and minimum factors awarded respectively for each of the 12 elements of the standard and for the standard as a whole.

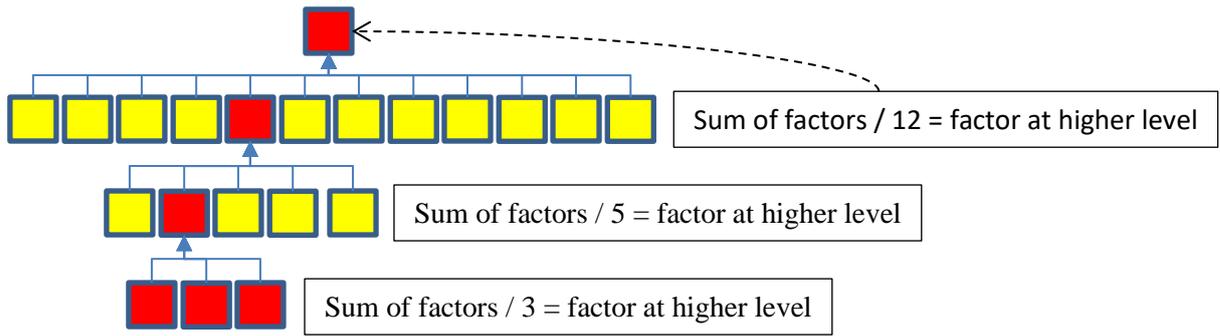


Figure 31: Compliance Score Computation Example

## Appendix 2: Classification of Structures and Processes Example

This appendix supports sections E.1.6.2 [Classification of structures and processes](#), 0 [Planned Monitoring](#), E.9.1 [Change management lifecycle](#) and E.10.1.3.1 [Event classification](#)

[Classifying structures](#) according to the degree that they have the potential for loss and gain helps an [organisation](#) or [project](#) to [systematically](#) apply appropriate [management control](#). Any [classified structure](#) or [process](#) requires a [defined](#) level of [competent](#) manager, rigor of [prospect and risk assessment](#), and [monitoring](#) etc. The following table is an example of a [system](#) for [classifying structures](#) and [processes](#).

**Table 4: Classification of structures and processes example**

| Class  | Potential impact rating<br>See <a href="#">Appendix 3: Prospect and Risk Rating System Example</a>   | Scope of Prospect and Risk Assessment and Management Control  | Planned Monitoring   |
|--------|--|---|--|
| High   | 5 or 6<br><br><b>OR</b><br>3 or 4 if <a href="#">structures</a> and <a href="#">processes</a> are complex or contain novel <a href="#">aspects</a> .   | Rigorous <a href="#">prospect and risk assessment required</a> that assesses <a href="#">uncontrolled</a> and <a href="#">controlled/residual prospect and risk</a> .<br>Formal briefing to be given by the line manager and acknowledged by <a href="#">workers</a> .  | <a href="#">Monitoring of prospect and risk controls</a> that is appropriate to the consequence of the controls failing. |
| Medium | 3 or 4 if <a href="#">structures</a> are simple and processes contain no novel <a href="#">aspects</a> .<br><br><b>OR</b><br>1 or 2 if <a href="#">structures</a> and <a href="#">processes</a> are complex or contain novel <a href="#">aspects</a> . | Supervisor may make use of generic <a href="#">risk assessments</a> if applicable.<br>Supervisors are <a href="#">required</a> to formally approve <a href="#">prospect and risk assessment</a> and confirm applicability of generic <a href="#">prospect and risk assessments</a> .                                  | Routine <a href="#">monitoring</a> .   |
| Low    | 1 or 2 if <a href="#">structures</a> and <a href="#">processes</a> are simple containing nothing novel.  | <a href="#">Workers</a> may make use of generic <a href="#">risk assessments</a> if applicable. <a href="#">Worker</a> is <a href="#">required</a> to formally confirm applicability of generic <a href="#">risk assessments</a> . <a href="#">Competency</a> of <a href="#">worker</a> is used as principal control. | Principally self- <a href="#">monitoring</a> by the <a href="#">worker</a> .   |

## Appendix 3: Prospect and Risk Rating System Example

This appendix supports sections E.1.6.5 [Prospect and risk improvement](#) and 0 [Planned Monitoring](#).

[Prospect and risk rating](#) methodologies are simple methods for estimating [prospect and risk](#). However, they are simplistic and should only be applied where appropriate using sensible judgement, [available](#) experience and [data](#). They are not a substitute for more rigorous or specialist methodologies which may be applicable in particular circumstances and may be a [stakeholder requirement](#) – refer to section **Error! Reference source not found.** [Prospect and risk assessment planning](#). [Expert](#) advice should be consulted regarding the appropriateness of the application – refer to section C.2.3 [Provision of expert advice and assistance](#).

This methodology may be applied individually or within a team and helps to promote debate, cooperation and sharing of experience and judgements.

This methodology comprises two principal steps – estimation of the [likelihood](#) and magnitude of the [event](#) followed by combining the two into an estimate of [prospect or risk](#). These stages are described in the following two subsections:

- [3.1 Universal likelihood and severity scales](#),
- [3.2 Prospect and risk rating matrix and scale](#).

Two additional subsections describe how this [process](#) may be used to introduce [prospect and risk control](#), and to [record](#) the [data](#) in a [structured prospect and risk register](#):

- [3.3 Prospect and risk control](#),
- [3.4 Prospect and risk register structure](#).

### 3.1 Universal likelihood and magnitude scales

This section should be read in conjunction with section E.1.6.4 [Prospect and risk analysis and synthesis](#).

[Likelihood](#), gain or loss magnitude rating scales use simple [data](#) measures such as high, medium and low (H, M and L) or a set of integers e.g. ‘1 to 6’ which has the advantage that it can easily be aligned with H, M and L and with the three traffic light colours to facilitate [colour coded communication](#). Shades of blue can be used to colour code levels of magnitude of potential gain.

#### 3.1.1 Estimation of event likelihood rating

Estimates of [likelihood](#) are generally more consistent using a numerical scale rather than a qualitative one i.e. avoiding qualitative statements such as high, medium, low, [unlikely](#) etc. and using statements such as once per year.

Table 5: Likelihood Rating **Error! Reference source not found.**, [defines](#) a scale from 1 to 6 that may be used to express estimates of the [likelihood](#) of [events](#), which may be [prospect or risk](#) or a mixture of both.

Table 5: Likelihood Rating

| Prospect | Likelihood Rating                      | Risk |
|----------|--|------|
| 1        | Every 1000 years                       | 1    |
| 2        | Every 100 years                        | 2    |
| 3        | Every 10 years                         | 3    |
| 4        | Yearly                                 | 4    |
| 5        | Monthly                                | 5    |
| 6        | Daily or<br>Continual or<br>Continuous | 6    |

In some cases [likelihood data](#) may be [available](#) that may be used for the estimate and in other circumstances best judgment may be the only [option](#). [Prospect and risk assessment](#) is not a perfect [process](#) but its use can be justified when it enables an [organisation](#) to [manage](#) or perform better by using it rather than not using it.

### 3.1.2 Estimation of magnitude rating

Estimates of potential gain or loss magnitude can similarly be expressed according to [prospect or risk rating](#) scales but need to be applied to all of the different facets of an [organisation's performance](#) that may form part of the [needs](#) and [expectations](#) of the [stakeholders](#) of the [organisation](#) – refer to [Appendix 6: General Aspects of an Organisation](#). These are shown in Table 6: Gain magnitude rating scales, and Table 7: Loss magnitude rating scales. They typically include scales covering:

- [Organisation](#) loss of functionality
- [Health](#) and [safety](#)
- [Environmental impact](#)
- [Commercial](#)
- [Security](#) (not applicable to [prospect](#))
- Reputation and public relations

The [organisation](#) may [define](#) its own [performance](#) facets, corresponding [risk classifications](#) and scale [definitions](#) as it deems appropriate. The [commercial](#) magnitude scale is an example for a very small [organisation](#) and should be adjusted to align with the actual [organisation's](#) circumstances and currency. The scale should increase in orders of magnitude with a level of -6 equating to a loss that the [organisation](#) would not reasonably recover from.

Although not essential, gain and loss magnitude ratings can follow the [convention](#) of positive for [prospects](#) and negative for [risks](#). This facilitates their differentiation in lists containing both [prospects and risks](#) including [conditional](#) formatting when using computer based spreadsheets.

When using the scales in practice it may be necessary to consult more than one scale to determine a gain and/or loss rating for an identified [prospect or risk](#) depending on the facets of [performance](#) being addressed. The multiple [prospect and risk ratings](#) should be appropriately aggregated. For [risk](#), the largest [risk rating](#) should be used as the aggregated [risk rating](#) value.

Table 6: Gain magnitude rating scales

| Gain Magnitude |  |  |  |   |  |
|----------------|--|--|--|---|--|
| Rating         | Organisation Functionality Improvement               | Health Improvement                                   | Environment Improvement  | Commercial Gain e.g. for a small organisation | Reputation and Public Relations Improvement  |
| 1              | Negligible improvement                               | Negligible improvement                               | Minor improvement to local <a href="#">environment</a> .                       | < £10   | Small increase in positive web site hits or other enquiries.   |
| 2              | Local minor <a href="#">unsustained</a> improvement. | Local minor <a href="#">unsustained</a> improvement. | <a href="#">Significant</a> improvement to local <a href="#">environment</a> . | £10 - £1000                                   | Measurable increase in positive web site hits or other enquiries regarding confidence in the <a href="#">organisation's operations</a> . |

| Gain Magnitude |   |  |   |   |   |
|----------------|---|--|---|---|---|
| Rating         | Organisation Functionality Improvement  | Health Improvement   | Environment Improvement   | Commercial Gain e.g. for a small organisation | Reputation and Public Relations Improvement   |
| 3              | Local minor <a href="#">sustained</a> OR Local <a href="#">significant</a> <a href="#">unsustained</a> improvement.           | Local minor <a href="#">sustained</a> OR Local <a href="#">significant</a> <a href="#">unsustained</a> improvement.      | Major improvement to local <a href="#">environment</a> OR <a href="#">Significant</a> improvement to the national <a href="#">environment</a> .   | £100 - £1,000                                 | <a href="#">Significant</a> increase in positive web site hits or other enquiries regarding confidence in the <a href="#">organisation's operations</a> .                       |
| 4              | Local <a href="#">significant</a> <a href="#">sustained</a> OR Widespread minor <a href="#">unsustained</a> improvement.      | Local <a href="#">significant</a> <a href="#">sustained</a> OR Widespread minor <a href="#">unsustained</a> improvement. | Major improvement to local <a href="#">environment</a> OR <a href="#">Significant</a> improvement to the national <a href="#">environment</a> OR Minor improvement to the world's <a href="#">environment</a> . | £1,000 - £10,000                              | Non front-page newspapers or non-lead TV/Radio positive news story for one day only.  |
| 5              | Widespread minor <a href="#">sustained</a> OR Widespread <a href="#">significant</a> <a href="#">unsustained</a> improvement. | Widespread minor <a href="#">unsustained</a> improvement.  | Major improvement to the national <a href="#">environment</a> OR <a href="#">Significant</a> improvement to the world's <a href="#">environment</a> .   | £10,000 - £100,000                            | Non front-page newspapers or non-lead TV/Radio positive news story for more than one day.<br>OR<br>Front page newspapers or lead TV/Radio positive news story for one day only. |
| 6              | Widespread <a href="#">significant</a> <a href="#">sustained</a> improvement  | Widespread minor <a href="#">sustained</a> OR Widespread significant <a href="#">unsustained</a> improvement.            | Major improvement to the world's <a href="#">environment</a> .  | > £100,000                                    | Front page newspapers or lead TV/Radio positive news story for more than one day.   |

Table 7: Loss magnitude rating scales

| Loss Magnitude |  |                                       |  |  |  |   |
|----------------|--|---------------------------------------|--|--|--|---|
| Rating         | Organisation Loss of Functionality   | Health and Safety                     | Environment  | Commercial e.g. for a small organisation | Security   | Reputation and Public Relations                                   |
| -1             | Minor disruption to <a href="#">operations</a> or <a href="#">services</a> . | <a href="#">Insignificant</a> injury. | Negligible <a href="#">impact</a> to <a href="#">environment</a> . | < £10                                    | Negligible <a href="#">impact</a> on <a href="#">security</a> and no loss. | Negligible increase in negative web site hits or other enquiries. |

| Loss Magnitude |  |   |   |  |  |  |
|----------------|--|---|---|--|--|--|
| Rating         | Organisation Loss of Functionality                                   | Health and Safety                             | Environment   | Commercial e.g. for a small organisation | Security   | Reputation and Public Relations  |
| -2             | Loss of <a href="#">service</a> up to 24 hours.                      | Minor injury.                                 | Low <a href="#">impact</a> to local <a href="#">environment</a> .   | £10 - £1000                              | Minor <a href="#">security</a> breach with no <a href="#">significant</a> loss.  | Measurable increase in negative web site hits or other enquiries regarding confidence in the <a href="#">organisation's operations</a> .                                 |
| -3             | Loss of a <a href="#">service</a> from 24 hours to a week.           | Serious injury.                               | <a href="#">Significant</a> local <a href="#">impact</a> to the <a href="#">environment</a> OR Low long-term <a href="#">impact</a> to the national <a href="#">environment</a> .   | £100 - £1,000                            | <a href="#">Security</a> breach leading to minor loss.   | <a href="#">Significant</a> increase in negative web site hits or other enquiries regarding confidence in the <a href="#">organisation's operations</a> .                |
| -4             | Loss of a <a href="#">service</a> for one week.                      | Serious injury with long-term incapacitation. | High local <a href="#">impact</a> to the <a href="#">environment</a> OR <a href="#">Significant</a> long term <a href="#">impact</a> to the national <a href="#">environment</a> OR Minor long-term <a href="#">impact</a> to the world's <a href="#">environment</a> . | £1,000 - £10,000                         | <a href="#">Security</a> breach leading to <a href="#">significant</a> loss.   | Non front-page newspapers or non-lead TV/Radio negative news story for one day only.   |
| -5             | Loss of all <a href="#">operations</a> between one week and a month. | Fatalities.                                   | Serious long term <a href="#">impact</a> to the national <a href="#">environment</a> OR <a href="#">Significant</a> long-term <a href="#">impact</a> to the world's <a href="#">environment</a> .   | £10,000 - £1000,000                      | Serious breakdown of <a href="#">security</a> causing major loss of confidence to a key <a href="#">customers</a> or other stakeholder(s). | Non front page newspapers or non-lead TV/Radio negative news story for more than one day OR Front page newspapers or lead TV/Radio news negative story for one day only. |
| -6             | Loss of all <a href="#">operations</a> for more than a month.        | Multiple fatalities.                          | Serious long term <a href="#">impact</a> to the world's <a href="#">environment</a> OR <a href="#">Significant</a> irreversible change to the world's <a href="#">environment</a> .   | > £100,000                               | Major breach of <a href="#">security</a> leading to total lack of confidence in current and previous <a href="#">operations</a> .          | Front page newspapers or lead TV/Radio negative news story for more than one day.  |

### 3.2 Prospect and risk rating matrices and scales

This section should be read in conjunction with section E.1.6.4 [Prospect and risk analysis and synthesis](#).

[Prospect and risk rating](#) matrices consist of rows and columns, shown in Figure 32: Prospect Rating Matrix and Figure 33: Risk Rating Matrix. They comprise an array of output [values](#) computed from inputting the [likelihood](#) estimate and the magnitude of gain or loss estimates obtained from using the [likelihood](#) and consequence scales described in the preceding section [3.1 Universal likelihood and severity scales](#).

|                          |        |   |            |             |             |             |             |             |
|--------------------------|--------|---|------------|-------------|-------------|-------------|-------------|-------------|
| Potential Gain Magnitude | High   | 6 | (6)<br>2.5 | (12)<br>3.5 | (18)<br>4.2 | (24)<br>4.9 | (30)<br>5.5 | (36)<br>6   |
|                          |        | 5 | (5)<br>2.2 | (10)<br>3.2 | (15)<br>3.9 | (20)<br>4.5 | (25)<br>5   | (30)<br>5.5 |
|                          | Medium | 4 | (4)<br>2   | (8)<br>2.8  | (12)<br>3.5 | (16)<br>4   | (20)<br>4.5 | (24)<br>4.9 |
|                          |        | 3 | (3)<br>1.7 | (6)<br>2.5  | (9)<br>3    | (12)<br>3.5 | (15)<br>3.9 | (18)<br>4.2 |
|                          | Low    | 2 | (2)<br>1.4 | (4)<br>2    | (6)<br>2.5  | (8)<br>2.8  | (10)<br>3.2 | (12)<br>3.5 |
|                          |        | 1 | (1)<br>1   | (2)<br>1.4  | (3)<br>1.7  | (4)<br>2    | (5)<br>2.2  | (6)<br>2.5  |
| Likelihood               |        |   |            |             |             |             |             |             |
|                          |        |   | Low        | Medium      | High        |             |             |             |
|                          |        |   | 1          | 2           | 3           | 4           | 5           | 6           |

Figure 32: Prospect Rating Matrix

The combinations of [likelihood](#) and magnitude obtained by simple multiplication compute to numbers between 1 and 36 shown in brackets in the top part of the cells. Below these [values](#), the combinations have been normalized to numbers between 1 and 6 by taking the square root e.g. 36 becomes 6. These numbers can be further rationalised and expressed as integers. Simple [likelihood](#) and severity estimation scales ranging from 1 to 6 can therefore be used to provide a simple estimate of [prospect or risk](#) ranging from 1 to 6 or -1 to -6 respectively using the rating scales [defined](#) by the [prospect and risk](#) matrices. All these scales are [calibrated](#) from 1 to 6 or -1 to -6 and can be conceptually interpreted as high, medium and low facilitating a simple [communication](#) of the estimated [prospect or risk](#) using appropriate [colour coded communication](#).

|                          |        |    |              |              |               |              |               |               |
|--------------------------|--------|----|--------------|--------------|---------------|--------------|---------------|---------------|
| Potential Loss Magnitude | Low    | -1 | (-1)<br>-1   | (-2)<br>-1.4 | (-3)<br>-1.7  | (-4)<br>-2   | (-5)<br>-2.2  | (-6)<br>-2.5  |
|                          |        | -2 | (-2)<br>-1.4 | (-4)<br>-2   | (-6)<br>-2.5  | (-8)<br>-2.8 | (-10)<br>-3.2 | (-12)<br>-3.5 |
|                          | Medium | -3 | (-3)<br>1.7  | (-6)<br>2.5  | (-9)<br>3     | (-12)<br>3.5 | (-15)<br>3.9  | (-18)<br>4.2  |
|                          |        | -4 | (-4)<br>-2   | (-8)<br>-2.8 | (-12)<br>-3.5 | (-16)<br>-4  | (-20)<br>-4.5 | (-24)<br>-4.9 |
|                          | High   | -5 | (5)<br>-2.2  | (10)<br>-3.2 | (15)<br>-3.9  | (20)<br>-4.5 | (25)<br>-5    | (30)<br>-5.5  |
|                          |        | -6 | (6)<br>-2.5  | (12)<br>-3.5 | (18)<br>-4.2  | (24)<br>-4.9 | (30)<br>-5.5  | (36)<br>-6    |
| Likelihood               |        |    |              |              |               |              |               |               |
|                          |        |    | Low          | Medium       | High          |              |               |               |
|                          |        |    | 1            | 2            | 3             | 4            | 5             | 6             |

Figure 33: Risk Rating Matrix

- Light blue, blue and dark blue corresponding to low, medium and [high prospect](#) respectively,
- Green, yellow and blue corresponding low, medium and high [risk](#) respectively.

|          |                       |
|----------|-----------------------|
| 5 to 6   | High prospect         |
| 3 to 4   | Tolerable prospect    |
| 1 to 2   | Unacceptable prospect |
| -1 to -2 | Low risk              |
| -3 to -4 | Tolerable risk        |
| -5 to -6 | Unacceptable risk     |

Combinations of [likelihood](#) and severity compute to three levels of [prospect](#) and three levels of [risk](#) uniquely coloured to differentiate them. They broadly correspond to the tolerability levels of [prospect and risk](#) shown in Table 8: Prospect and risk rating tolerability. [Organisations](#) normally [operate](#) with ideally high or [tolerable prospect](#) and low or [tolerable risk](#) avoiding low [unacceptable prospect](#) and high [unacceptable risk](#). However,

Table 8: Prospect and risk rating tolerability

[prospect and risk](#) may be modified by applying controls covered in [Appendix 3.3 Prospect and risk control](#).

Each corner of the matrices represents a different category of [prospect or risk](#) with respect to its [likelihood](#) and magnitude components – refer to Figure 34: Prospect and Risk Matrix Characteristics. The figure combines [prospect and risk](#) matrices shown separately in Figure 32: Prospect Rating Matrix and Figure 33: Risk Rating Matrix. The arrows emanating from the origin represent [prospect and risk vectors](#), which normally vary over time e.g. [prospect and risk](#) vary during the life of an [organisation](#) or [project](#).

The characteristics of the four principal regions of the [prospect and risk](#) matrices are described in the following four subsections:

### 3.2.1 Low-frequency and low magnitude

Low-frequency and low consequence represents a potential [event](#) of small consequence and rarely occurring and consequently warrants little [management](#) attention and consequently no specific [management controls](#).

### 3.2.2 Low-frequency and high magnitude

Low-frequency and high magnitude gain or loss represents a potential [event](#) where the consequences are very high, such as the winning of a very large [contract](#) or an earthquake or other major disaster, but happens very rarely. It is easy to for [organisations](#) to get complacent about low-frequency [events](#) because of their apparent rarity. Because these high consequence [events](#) are infrequent and cannot be predicted they require more sophisticated [management control](#).

### 3.2.3 High-frequency and low magnitude

High-frequency and low consequence represents a potential [event](#) that is frequent but low in consequence, for example many small sales or someone [sustaining](#) a minor bruise to part of their body. A large number of these types of [events](#) may add to a considerable gain or loss.

### 3.2.4 High-frequency and high magnitude

High-frequency and high consequence represents a potential event that is both frequent and has high consequence. An example of this would be road accidents that are reasonably frequent and people are often killed. However, major disasters are not frequent and would not come under this category.

### 3.2.5 Matrix symmetry and asymmetry

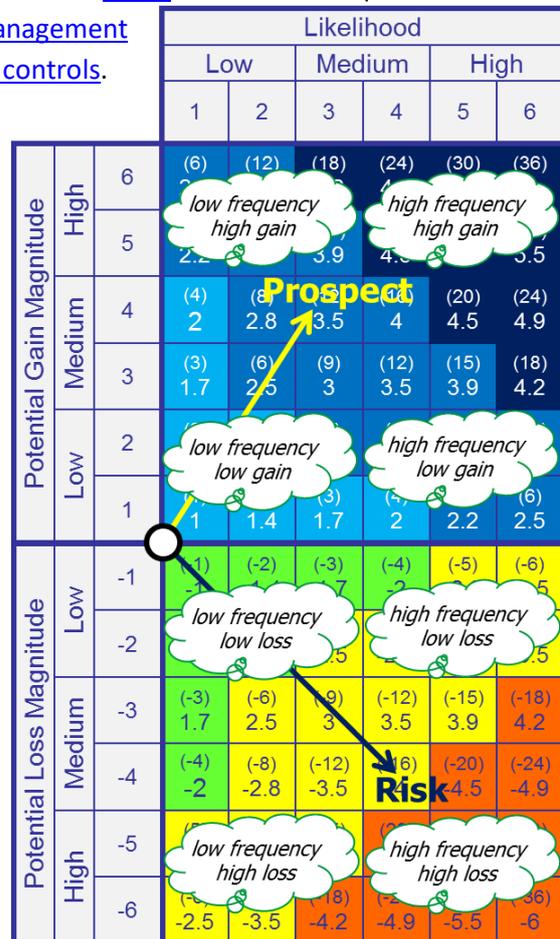


Figure 34: Prospect and Risk Matrix Characteristics

Across the matrices, cells with the same [value](#) can be [observed](#). The example matrices are symmetrical across a diagonal line running from (1)1 to (36)6. These type of [prospect and risk](#) matrices are most commonly used indicating that the [organisation](#) has no preference between a high frequency low consequence [prospect](#) and a low frequency high consequence [prospect](#) (and similarly for risk) e.g. no preference between ten [events](#) a year involving a single fatality and one [event](#) a year with ten fatalities. However, although the [likely](#) annual loss is ten fatalities in both instances the [impact](#) on the [organisation](#) can be different e.g., a multiple death [event](#) attracts more media and societal attention. For this reason, non-symmetrical skewed matrices are sometimes used by [organisations](#) to reflect that it is more averse to low frequency larger [impact events](#) than it is to high frequency lower [impact risks](#).

### 3.3 Prospect and risk control

This section should be read in conjunction with section E.1.6.5 [Prospect and risk improvement](#).

Any situation may be potentially improved by the application of [prospect and risk controls](#). An ideal [opportunity](#) would have a [prospect](#) rating of 6 with an associated [risk](#) rating of -1 but this is not normally the situation. An [organisation](#) would naturally avoid a low [unacceptable prospect](#) or a high [unacceptable risk](#) situation unless it is able to improve it through the application of [prospect and risk controls](#). A [tolerable prospect](#) or [tolerable risk](#) may be able to be improved to [high prospect](#) and low [risk](#) respectively respectively by applying controls where [practicable](#). However, the cost of applying the controls should not be disproportionately high.

The [prospect and risk assessment](#) methodology described in this matrix should be applied to estimate the levels of [prospect and risk](#) before and after controls are applied. The [prospect and risk](#) before application is often referred to as the inherent or [uncontrolled prospect and risk](#) and after is referred to as the [residual prospect and risk](#). The application of [prospect and risk controls](#) is shown conceptually in Figure 35: Application of Prospect and Risk Controls Example.

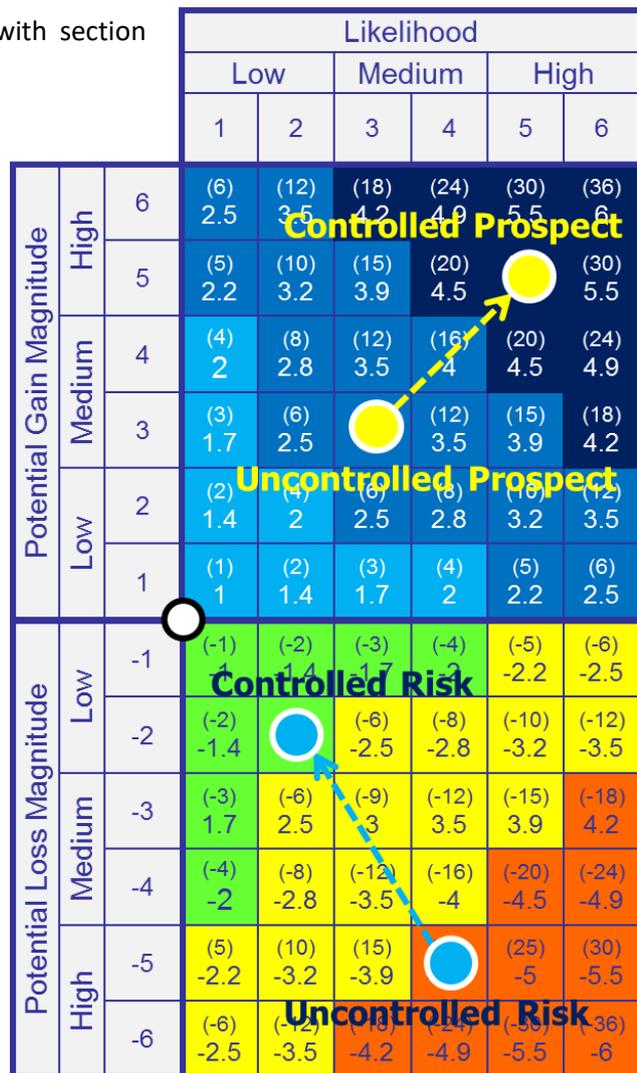


Figure 35: Application of Prospect and Risk Controls Example

If the applied [prospect and risk controls](#) are ill-conceived or should fail the respective [controlled prospect and/or risk](#), as applicable, will revert to the inherent [uncontrolled prospect and/or risk](#). [Planned monitoring](#) should therefore be applied appropriately depending on the potential [impact](#) of

the [controls](#) failing and the likelihood of the [controls](#) failing – refer to section 0 [Planned Monitoring](#) and [Appendix 3.4 Prospect and risk register structure](#) below.

### 3.4 Prospect and risk register structure

Figure 36 below provides an example of how a [prospect and risk register](#) may be [structured](#) for an [organisation](#) or [project](#) to [record](#) uncontrolled and controlled [prospect and risk ratings](#) derived from [prospect and risk assessments](#). It acts as a [transparent structure](#) to help guide and iterate assessments, facilitate independent [peer review](#), demonstrate compliance with the [organisation's prospect and risk criteria](#), indicate where [planned monitoring](#) should be particularly focused, and act as a basis for assessing the impacts of proposed changes within the [organisation](#) or [project](#) – refer to section E.1.6 [Prospect and risk assessment](#) and Figure 10: Prospect and Risk Assessment Cycle.

The register [structure](#) may be adapted to suit the particular [needs](#) of the [organisation](#) and may be [recorded](#) on a spreadsheet or [database](#). Conditional formatting may be employed to promote [colour coded communication](#). Absolute [prospect and risk](#) estimates may be used instead of [prospect and risk ratings](#).

Typical [data](#) entered is as follows:

1. **Reference Number.** This should ideally be an [organisation/project](#) universal hierarchical reference to aid [identification](#) and [traceability](#).
2. **Structure and/or process.** This defines the focus of the [prospect and/or risk assessment](#) – refer to sections E.1.1 [Foundation planning](#) and E.1.6.1 [Prospect and risk assessment planning](#).

An additional column may be added to record the [structure](#) and/or [process classification](#).

3. **Aspects and Impacts (opportunities, threats, hazards).** This defines the particular [aspects](#) and [impacts](#) associated with the [structure](#) and/or [process](#) that may be viewed positively or negatively by [stakeholders](#) e.g. [health](#) and [safety](#) of people, the [environment](#), [commerce](#) and [assets](#) etc. These aspects and impacts can be recorded in separate dedicated columns. Refer to section E.1.6.1 [Prospect and risk assessment planning](#) and [Appendix 6: General Aspects of an Organisation](#). The recording of [aspects](#) and [impacts](#) supports the requirements of section E.1.6.3 [Prospect and risk identification](#).
4. **Uncontrolled Potential Gain and/or Loss Ratings.** 4a to 4d [record](#) the assessed uncontrolled potential gain and loss ratings – refer to [Appendix 3.1 Universal likelihood and magnitude scales](#), Table 6: Gain magnitude rating scales and Table 7: Loss magnitude rating scales. 4e and 4f [record](#) the highest gain rating and the lowest risk rating respectively. Gain ratings should be [recorded](#) as positive and loss ratings as negative. These ratings support the requirements of section E.1.6.4 [Prospect and risk analysis and synthesis](#).
5. **Uncontrolled Likelihood.** This is the assessed uncontrolled likelihood rating for the potential [event](#) – refer to [Appendix 3.1 Universal likelihood and magnitude scales](#) **Error! Reference source not found.** These ratings support the requirements of section E.1.6.4 [Prospect and risk analysis and synthesis](#).
6. **Uncontrolled Prospect.** This is the combination of the 4e and 5 ratings and represents the maximum [uncontrolled prospect](#) – refer to Figure 32: Prospect Rating Matrix. These ratings support the requirements of section E.1.6.4 [Prospect and risk analysis and synthesis](#).





13. **Legislation.** These are references to applicable legislation relating to the [organisation structure](#) or [process](#) or [aspect](#) being assessed – refer to section E.1.5 [Legislation and standards](#).
14. **Controls Criticality.** This is an estimate rating (e.g. high, medium, low) of the criticality of the [prospect and/or risk controls](#) defined to enhance the [prospect](#) or reduce the [risk](#) respectively. If these administrative or engineered [prospect and/or risk controls](#) fail, the [controlled prospect](#) or [controlled risk](#) will tend to become the [uncontrolled prospect](#) or [uncontrolled risk](#) respectively. The rating may be used to inform the [planned monitoring arrangements](#) by varying the frequency and degree of [inspections](#) and [audits](#) supporting a [prospect and risk informed](#) dynamic [planned monitoring](#) program – refer to section E.11.1 [Monitoring planning](#).
15. **Actions and responsibility.** This section permits the [recording](#) of [actions](#) related to the implementation and [maintenance](#) of the [prospect and risk controls](#) and the assignment of [responsibility](#). It may be in the form of a cross reference to another [document](#). These records may be used to support the requirements of sections E.1.6.7 [Prospect and risk assessment review](#) and E.1.6.8 [Residual prospect, risk and controls acceptance](#).
16. **Notes.** This section permits the [recording](#) of additional [data](#) that may assist in understanding the [prospect and risk assessment](#) and its future [review](#) that may not necessarily be performed by the originator. These records may be used to support the requirements of section E.1.6.7 [Prospect and risk assessment review](#).

## Appendix 4: Management Tools and Techniques

For application, refer to section E.1.8 [Management tools and techniques](#).

The following is a non-exhaustive list of [management tools](#) typically used to assist [organisations](#) to improve their [management structures](#) and [processes](#) and help [manage under uncertainty](#).

### 3d Graphs

Graph of a function of two variables  $f(x, y)$ . Provided that  $x$ ,  $y$ , and  $f(x, y)$  are real numbers, the graph can be represented as a planar or curved surface in a three-dimensional Cartesian coordinate system.

### Absolute Probability Judgment (APJ)

Methodology for assessing human reliability as part of [risk assessment](#) and [risk control](#). It is also known as 'Direct Numerical Estimation'. It relies on the utilization of [experts](#) to estimate [human error](#) probabilities based on their knowledge and experience.

### Activity Network (critical path network)

Diagram displaying inter-dependencies between tasks through the use of boxes and arrows. Used to schedule dependent activities within a [plan](#). Arrows pointing into a task box come from its predecessor tasks, which must be completed before the task can start. Arrows pointing out of the task box go into its successor tasks, which cannot start until at least this task is complete.

### Affinity Diagram

Diagram used to [structure](#) a large number of discrete pieces of information. Use to bring order where there are many individual pieces of information held by different people but there is no clear picture of the overall state.

### Aspect and Impact Questionnaires

Set of questions to elicit [aspect and impact identification data](#) within an [organisation](#). See also '[Check Sheets](#)'.

### Bar Chart

Chart used to show the differences between related groups of [measurements](#) when a set of [measurements](#) can be split into discrete and comparable groups, to show the relative change between these groups and when there are multiple sets of [measurement](#) groups, to show the relationship and change within and between groups.

### Bayesian Statistics

Statistical technique in which the evidence about the true state of the world is expressed in terms of degrees of belief or, more specifically, Bayesian probabilities. Used in [prospect and risk assessment](#).

### Boston Grid

Chart to present [organisation](#) units or product lines. Used for [prospect and risk identification](#) and assessment. This helps the [organisation](#) allocate resources and is used as an analytical tool in [brand marketing](#), product [management](#), strategic [management](#), and portfolio [analysis](#).

**Bowtie**

Diagram that visualizes the [prospect](#) or [risk](#) under consideration in just one, easy to understand picture. The diagram is shaped like a bow-tie, creating a clear differentiation between [proactive](#) and [reactive prospect](#) and [risk management](#). Used to analyze [prospect](#) and [risk](#) and to [communicate hazard](#) the findings to a broad audience. See also Figure 24: Reactive Investigation.

**Brainstorming**

Technique that encourages [creative](#) thinking and the generation of ideas. Used to move outside of rational or conventional thinking.

**Cash Flow Analysis**

Type of financial [analysis](#) that compares the timing and amount of cash inflows with the timing and amount of cash outflows. Used for [prospect and risk assessment](#), as a firm's cash flow position can greatly affect its ability to remain in [operation](#). These effects may not be apparent from a '[Cost Benefit Analysis](#)'.

**Cause and Effect Analysis**

Technique for identifying the possible causes affecting a problem or [project](#). A cause-and-effect diagram is a simple yet powerful method of visually [recording](#) possible causes and their effects. Used for [prospect and risk identification](#) and [prospect and/or risk assessment](#). Also for defining a problem, identifying possible [data](#) requirements, identifying possible causes, developing [objectives](#) for solutions, and narrowing down causes. Also known as a '[Fishbone Diagram](#)'.

**Check Sheets**

Form used to gather [data](#) over time. A [systematic](#) and simple way of [recording data](#). Use to find out what the facts are, to prove or disprove what is actually happening, to detect patterns or trends, to provide a logical start point or bases against which progress can be [measured](#). It may be deployed at any point in the problem identification [process](#).

**Concentration Diagrams**

Visual displays of how often and where defects or problems occur, on a product, or a form, or in a [process](#). May be deployed during [data](#) gathering, when analyzing [data](#), or as solutions are implemented and [tested](#). Useful for identifying areas or recurring faults and to determine the relative frequency of each position of a fault.

**Control Charts**

Plot of [process data](#) values over time, with high and low tolerance levels. Used to understand [process](#) variation.

**Cost Benefit Analysis**

[Systematic process](#) for calculating and comparing benefits and costs of a [project](#), decision or government policy. Used for [risk assessment](#) and [prospect and risk control](#). It involves comparing the total expected cost of each option against the total expected benefits, to see whether the benefits outweigh the costs, and by how much.

### Critical Path Analysis

Used for [project](#) and task [management](#). It is a methodology for determining which series and parallel activities determine the time of a [project](#) or task to be completed. See also '[Activity Network](#)' and '[PERT](#)'.

### Data Handling and Display

Used for displaying [data](#) graphically or pictorially to aid communication, add impact, and highlight [data](#) relationships. It may be applied at any stage in the problem-solving [process](#) or when monitoring progress of the implemented solution.

### Decision Tree

Graphical representation of multiple options that in turn may be successful or fail. Useful when [required](#) to select from a number of possible courses of [action](#).

### Delphi Technique

[Structured](#) communication technique, originally developed as a [systematic](#), interactive forecasting method that relies on a panel of [experts](#). Useful for [prospect and risk identification](#) and [prospect and/or risk assessment](#).

### Design of Experiments

Methodology to improve the [effectiveness](#) and [efficiency](#) of experimentation. It promotes an understanding of the effects of different factors in a given situation.

### Event Tree Analysis (ETA)

Inductive analytical diagram in which an [event](#) is analyzed using Boolean logic to examine a chronological series of subsequent [events](#) or consequences. An [event](#) tree displays sequence progression, sequence end states and sequence-specific dependencies across time.

### Expected Value Method

Involves multiplying each of the possible outcomes by the likelihood that each outcome will occur, and summing all of those values. Useful for [risk assessment](#). By calculating expected values, [stakeholders](#) can choose the scenario that is most likely to give a desired outcome.

### Failure Mode and Effects Analysis (FMEA)

Methodology to identify and prioritize how items fail and the effects of that [failure](#). Use when [designing](#) products or [processes](#) and for investigating existing [structures](#). See also [mode](#).

### Failure Prevention Analysis

Method to anticipate problems before they happen. Helps move from reacting to [failure](#) to being [proactive](#) in preventing [failure](#). Used on any new activity, whenever a significant change is [planned](#), or where consequences of [failure](#) are potentially major.

### Fault Tree Analysis

Shows combinations of [failures](#) that can cause overall [system failure](#). It employs a method of breaking down chains of [failures](#), with a key addition for identifying combinations of faults that cause other faults.

### **Fishbone Diagram**

See [Cause and Effect Analysis](#)

### **Flow Chart**

Used to understand workflows. Major steps of an [operation](#) are connected with lines and arrows.

### **Focus Groups**

Form of qualitative research in which a group of people are asked about their perceptions, opinions, beliefs, and attitudes towards a good, service, concept, advertisement, idea, or packaging etc. Questions are asked in an interactive group setting where participants are free to talk with other group members. Used for [prospect and risk identification](#) and determining [stakeholder needs](#) and [expectations](#).

### **Force Field Analysis**

Technique for identifying forces that help or obstruct a desired change. Weighs up the points for and against a potential [action](#). Used whenever [managing](#) change and [planning](#) to overcome barriers to change. It helps by defining what is working for and against any proposal, identifying forces that cannot be changed.

### **Flying Bricks Charts**

See [Waterfall Charts](#).

### **Gantt Chart**

Simple horizontal bar chart used to show the time each task is intended to take. Bars represent the actual calendar time that is [planned](#) for each task. The scale used for the time will depend on the overall size of the [project](#) and the estimation increment used.

### **Gap Analysis**

Comparison of actual [performance](#) with potential [performance](#). Used for [prospect and risk identification](#) and [prospect and risk assessment](#).

### **Hazard and Operability Study (HAZOP)**

[Structured](#) and [systematic](#) examination of a [planned](#) or existing [process](#) or [operation](#) to identify and evaluate problems that may represent [prospects](#) or [risks](#) to personnel or equipment, or prevent [efficient operation](#).

### **Heat Maps**

Used for [prospect and risk assessment](#) and [prospect and risk control](#). They are graphical representations of [data](#) where the individual values contained in a matrix are represented as colours (usually red, amber, and green). It is a form of [colour coded communication](#) (CCC).

### **Hierarchical Task Analysis (HTA)**

Task description method and a variant of task [analysis](#), used for complex [processes](#). Task description is a necessary precursor for other [analysis](#) techniques, including 'Critical Path Analysis (CPA)'. HTA is used to produce an exhaustive description of tasks in a hierarchical [structure](#) of goals, sub-goals, [operations](#) and plans, where tasks are broken down into progressively smaller units.

## Histograms

Bar graph display of [process performance](#) using two variables. This allows the proportion of occurrence by category to be displayed visually.

## How-How Diagrams

Simple technique for considering solution alternatives rather than jumping to the obvious, but not necessarily best solution. It can help to isolate specific steps to implementing a solution and hence formulate an [action plan](#). Useful for selecting, [testing](#) and costing solutions and their [action](#) plans.

## Human Cognitive Reliability Method (HCR)

Methodology for assessing human reliability, as part of [risk assessment](#) and [prospect and risk control](#). The technique represents the operating crew [actions](#) in terms of an extended [operation](#) action tree and quantifies the probability of their nonresponse using one of a set of three time related correlations.

## Human Error Assessment and Reduction Technique (HEART)

Methodology for assessing human reliability, as part of [prospect and risk assessment](#) and [prospect and risk control](#). It considers human reliability to be dependent upon many factors.

## Infrastructure Tour

A [systematic](#) physical and/or virtual tour (walk down or study of drawings and photographs etc.) of [infrastructure](#), including plant [systems](#) and equipment etc., to [identify prospects and risks \(threats/hazards\)](#). This may be supplemented by more structured approaches e.g. '[Hazard and Operability Study \(HAZOP\)](#)' or '[Failure Mode and Effects Analysis \(FMEA\)](#)' etc., [as appropriate](#).

## Icam-Definition

Functional modeling technique for computer-aided manufacturing. Used to make a detailed and clear description of a [process](#) or [structure](#).

## Influence Diagram Approach (IDA)

Methodology for assessing human reliability, as part of [risk assessment](#) and [prospect and risk control](#). It is based on the principle that human reliability is determined by the combined influences of multiple factors.

## Interviews

Conversations in which one person (the interviewer) elicits information from another person (the subject or interviewee). Used for [prospect and risk identification](#), determining [stakeholder needs](#) and [expectations](#), [reactive investigation](#), assessing competence etc.

## Latin Hypercube

Statistical method for generating a sample of plausible collections of parameter values from a multidimensional distribution. The sampling method is often used to construct computer-based experiments. Used for [prospect and risk assessment](#).

## Line Graph

Set of points that are plotted on a graph from pairs of numbers in a list, with lines drawn between each pair. Typically, one number in the pair is the [measured](#) item and is shown on the vertical axis, while the second number is shown on the horizontal axis. Useful for showing patterns of change in a sequence of [measurements](#).

### **Linear Programming**

Method to achieve the best outcome (such as maximum profit or lowest cost) in a mathematical model whose requirements are represented by linear relationships. Linear programming is a special case of 'Mathematical Programming' (mathematical optimization), used to optimally deploy resources.

### **Mario Charts**

See [Waterfall Charts](#).

### **Matrix Data Analysis Chart**

Chart that helps to identify clusters of related items within a larger group. It [classifies](#) items by identifying two major characteristics common to all items and then plotting each item as a point on a standard X – Y chart.

### **Matrix Diagram**

Technique to identify the relationship between layers of lists. It compares lists by turning the second list on its side to form a matrix.

### **Monti Carlo Analysis**

Broad [class](#) of computational [algorithms](#) for [prospect and risk analysis](#) and [prospect and risk control](#). It uses repeated random sampling to obtain numerical results. It is useful for modeling the dynamic behavior of [systems](#).

### **Nominal Group Technique**

Group problem-solving [process](#) involving problem [identification](#), solution generation, and decision-making.

### **Paired Comparisons**

Technique used after '[Brainstorming](#)' ideas to reduce them to a usable number and placed them in a preferred order. Enables group consensus to be achieved in a [structured](#) way, avoiding long debate and voting. Useful for human reliability assessment as part of [prospect and risk assessment](#) and [prospect and risk control](#).

### **Pareto Analysis**

Simple method that helps separate the major causes of the problem from the minor ones, displayed in the form of a vertical bar chart. Also known as the 80/20 rule; 80% of the problems are due to 20% of the causes. Used to display the relative importance of causes and choose a solution start point. Also, to compare [data](#) over different time periods.

### **Pareto Charts**

Bar chart showing the quantity of occurrence by category, sorted high to low. Used to show actual and potential variation.

### Performance Indicators

Type of [performance measurements](#). An [organisation](#) may use [performance indicators](#) to evaluate its success, or the level of [performance](#) of a [structure](#) and/or [process](#). Encourages [performance monitoring](#) at all levels within an [organisation](#). See also [key performance indicator](#). See also 'Prospect Indicators' and 'Risk Indicators'.

### Political, Economic, Sociological, Technological, Legislation and Environment Analysis (PESTLE)

Analytical tool for [prospect and risk identification](#) and [prospect and/or risk assessment](#). It contributes to [strategic organisation planned](#) and is a [strategic](#) framework for understanding external influences on an [organisation](#).

### Portfolio Analysis

[Process](#) used to assess the suitability of a portfolio of securities or businesses relative to its expected investment return and its correlation to the [prospect](#) and [risk](#) tolerance of an investor seeking the optimal trade-off between [prospect](#) and [risk](#).

### Prioritization Matrix

Provides a way of sorting a [diverse](#) set of items into an order of importance. It also enables their relative importance to be identified by deriving a numerical value of the importance of each item.

### Probability and Consequence Grid/Diagrams (PIDS)

Way of graphically displaying [prospect](#) and [risk](#) estimates with respect to likelihood and consequence. Used for [prospect and risk identification](#) and [prospect and/or risk assessment](#)

### Probability Trees

Diagram used in probability calculations for [prospect and risk assessment](#).

### Process Capability

Methodology to determine the ability of the [process](#) to meet specification limits. If the [measured](#) output of a [process](#) exceeds the specified limits, the [process](#) is deemed to be out of control.

### Process Decision Program Chart

Provides a simple method to identify potential problems and countermeasures. It identifies [prospects](#) and [risks](#) and control measures.

### Process Flow Charts

Diagrammatic picture of the various steps, form the sequence of the sub [processes](#) of a [process](#). Often shortened to flowchart. This tool is frequently used and is a necessary part of understanding how any job or [process](#) operates.

### Profile Graphs

Stacked area graphs of [prospect](#) or [risk](#) magnitude. The [prospect](#) or [risk](#) magnitude scores are plotted one on top of another to give a cumulative magnitude profile of the [project](#). When [prospects](#) or [risks](#)

and their history of magnitude are displayed like this it is much easier to interpret the overall [prospect](#) and [risk](#) status of the [project](#).

### **Program Evaluation and Review Technique (PERT)**

See '[Critical Path Analysis](#)'.

### **Project Profile Model (PPM)**

[Prospect and risk identification](#) method, using a standard set of high-level criteria for assessing the degree of complexity of a proposed asset investment.

### **Prospect and/or Risk Mapping and Profiling**

Graph that illustrates in grid format the frequency and magnitude of possible and probable gains and/or losses that may be incurred by the [organisation](#). Used for [prospect and risk identification](#) and [prospect and/or risk assessment](#).

### **Prospect and/or Risk Modelling and Simulation**

Variety of techniques to present a portfolio and make forecasts of the likely gain and losses that would be incurred for a variety of [prospects](#) and [risks](#). See also '[Monte Carlo](#)' and '[Latin Hypercube](#)'.

### **Prospect and/or Risk Register/Database**

Central repository for all [prospects](#) and/or [risks](#) identified by the [project](#) or [organisation](#). Each identified [prospect](#) or [risk](#) includes information such as [prospect](#) or [risk](#) probability, impact, counter-measures, owner and so on. It is sometimes called a '[Prospect](#) and/or [Risk](#) Log'.

### **Prospect and/or Risk Workshop**

Group activity lead by a facilitator to identify and assess [prospects](#) and/or [risks](#). Also called '[What If Workshop](#)'.

### **Prospect Indicators**

[Measure](#) used in [management](#) to indicate how large the [prospect](#) is associated with an activity. It differs from a '[Performance Indicator](#)' in that the latter is meant as a [measure](#) of how well something is being done while the former is an [indicator](#) of the possibility of future adverse impact. See also '[Risk Indicators](#)'.

### **Qualitative Prospect and/or Risk Assessment**

Determination of qualitative value of [prospect](#) or [risk](#) related to a concrete situation and a recognized opportunity or [threat](#) (also called [hazard](#)). See '[Prospect Assessment](#)' and '[Risk Assessment](#)'.

### **Quantified Prospect and/or Risk assessment**

Quantitative [prospect and/or risk assessment](#) requires calculations of two components [prospect](#) (P) or [risk](#), the magnitude of the potential gain (G) or loss (L), and the probability (P) that the loss will occur. See '[Prospect Assessment](#)' and '[Risk Assessment](#)'.

### **Radar Chart**

Graphical method of displaying multivariate [data](#) in the form of a two-dimensional chart of three or more quantitative variables represented on axes starting from the same point. It is also known as web

chart, spider chart, star chart, star plot, cobweb chart, irregular polygon, polar chart, or kiviati diagram. Used for [prospect and risk assessment](#) and [prospect and risk control](#).

### RAG Status Reports

Reports with element criticality rated as red, amber, or green, the colors used for traffic lights. It is a form of [colour coded communication](#) (CCC). Used for [prospect and risk assessment](#) and response. Also called '[Heat Maps](#)'.

### Ranking and Rating

[Structured process](#) of placing a number of options in order of preference, by using the scoring [system](#) that is called rating. Used for deciding on which problems to tackle, which solutions to implement, and which alternatives to use.

### Relations Diagram

Used to clarify and understand multiple complex relationships between different elements of a problem that cannot be organized into familiar [structures](#) such as hierarchies or matrices.

### Resource Analysis

[Project management](#) technique to optimize the application of resources to a critical path [network](#). See '[Critical Path Analysis](#)'.

### Risk Breakdown Structure

Hierarchically organized depiction of the identified [project risks](#) arranged by category. Used for [risk identification](#) and [risk assessment](#). Also called [risk taxonomy](#).

### Risk Checklists/Prompt Lists

Job aid ([checklist](#)) used to reduce [failure](#) by compensating for potential limits of human memory and attention. It helps to ensure consistency and completeness in carrying out a task.

### Risk Indicators

[Measure](#) used in [management](#) to indicate how [risky](#) an activity is. It differs from a '[Performance Indicator](#)' in that the latter is meant as a [measure](#) of how well something is being done while the former is an [indicator](#) of the possibility of future adverse impact. See also [performance indicator](#).

### Root Cause Analysis

Method of problem solving that tries to identify the [root causes](#) of faults or problems. See also section E.10.1.3 [Investigation and analysis of root causes](#).

NOTE 1: [Root causes](#) should ideally be [classified](#) according to the management topic [taxonomy](#) adopted by this [MSS](#) to facilitate change improvements to the relevant part of the [organisation's](#) or [project's management system](#) etc. – refer to section A.1.3 [Universal PDCA twelve element structure](#).

### Scatter Diagram

A plot showing occurrences between two variables, to understand relationships. Used to understand [process](#) variation. Also used to show the type and degree of any causal relationship between two factors.

### Scenario Analysis/Scenario Planning/Horizon Scanning

[Process](#) of analysing possible future [events](#) by considering alternative possible outcomes (sometimes called “alternative worlds”). Use for [prospect and risk identification](#), [prospect and/or risk assessment](#) and [prospect and risk control](#).

### Sensitivity Analysis

Study of how the [uncertainty](#) in the output of a mathematical model or [system](#) (numerical or otherwise) can be apportioned to different sources of [uncertainty](#) in its inputs. Used for [prospect and risk assessment](#). A related practice is ‘[Uncertainty Analysis](#)’.

### Solution Effect Analysis

Diagram that is the reverse of a cause and effect diagram. Used to check that a solution to a problem solves that problem and does not cause other problems. Often identifies further [action](#) necessary to implement the chosen solution.

### Stakeholder Analysis

Technique used to identify [stakeholders](#), their [needs](#), their [expectations](#), their aspirations and their ability to influence or exercise power. Used during foundation [planning](#) of [organisations](#), [projects](#), [structures](#) and [processes](#).

### Stakeholder Engagement Matrices

Graphical [prospect and risk identification](#) method used to [record](#) and [communicate stakeholder needs](#) and [expectations](#).

### Strengths Weaknesses, Opportunities and Threats Analysis (SWOT)

[Structured planning](#) method used to evaluate the strengths, weaknesses, [opportunities](#), and [threats](#) involved in a [project](#) or in a business venture.

### Stress Testing

Form of deliberately intense or thorough [testing](#) used to determine the stability of a given [system](#) or entity. Used for [prospect and risk identification](#) and [prospect and/or risk assessment](#). It involves [testing](#) beyond normal process capacity, often to a breaking point, to observe the results.

### String Diagram

Tool for analyzing and [designing](#) workspaces such that movement can be minimized. It investigates the physical movements in a [process](#).

### Success Likelihood Index Method (SLIM)

Methodology for assessing human reliability, as part of [risk assessment](#) and [prospect and risk control](#). Its basic premise is that [human error](#) probabilities depend on the combined effects of [performance](#) shaping factors such as the time [available](#) to perform a task, [quality](#) of procedures, training, etc.

### Surveys

General term for a number of methods of collecting [data](#) from people and an [organisation’s](#) assets.

### Tables

Way of [recording](#) fragmented and disorganized [data](#). Used to organize and relate multiple pieces of information.

### **Technique for Human Error Rate Prediction (THERP)**

Method for assessing human reliability as part of [risk assessment](#) and [prospect and risk control](#). It models [human errors](#).

### **Tecnica Empirica Stima Error Operator (TESEO)**

Method for assessing human reliability as part of [prospect and risk assessment](#) and [prospect and risk control](#). [Experts](#) compare pairs of tasks for which [human error](#) abilities are [required](#). For each pair an [expert](#) must decide which has the highest likelihood of error.

### **The Decision Model (TDM)**

Method that separates the rules that govern decisions from [process](#) logic. Used for [analysis](#), [design](#) and [operation](#) of [organisation processes](#).

### **Tree Diagram**

Method of breaking down a problem, one layer at a time, into its component parts. It is a hierarchy as opposed to a [network](#). See also '[Hierarchical Task Analysis](#)'.

### **Uncertainty Analysis**

[Prospect and risk assessment](#) tool to investigate the [uncertainty](#) of variables used in decision-making [events](#). See also Sensitivity Analysis.

### **Utility Theory**

Problem solving, [prospect and risk control](#), and [organisation](#) decision method to determine the usefulness of something.

### **Value Analysis**

Approach to improving the value of an item or [process](#) by first understanding its functions and their values, then by identifying its constituent components and their associated costs.

### **Visualization Techniques**

Interactive [processes](#) using multiple [stakeholders](#) to improve understanding of [prospect](#) and [risk](#).

### **Voting**

Voting uses the democratic principle to enable all members of the group to agree on a final selection by giving equal selection power to each person. Helps to prioritize and select the best choice.

### **Waterfall Charts**

Form of [data](#) visualization for [prospect and risk assessment](#) and [prospect and risk control](#). It determines the cumulative effect of sequentially introduced positive or negative values. It is also known as a '[Flying Bricks Chart](#)' or '[Mario Chart](#)'.

### **What If Workshop**

Refer to [Prospect and/or Risk Workshop](#).



### **Why – Why Diagrams**

Method of identifying root causes of the problem. It is often used for greater depth than identified on the '[Cause and Effect Diagram](#)'. Useful for identifying a problem (or [risk](#)), identifying possible causes, identifying quick fixes, analyzing for true causes, and identifying potential solutions.

## Appendix 5: Supplier Classification and Grading Examples

This appendix supports section 0 [Suppliers](#).

### 5.1 Classification of Suppliers Example

The following [supplier classifications](#) allow a graded approach to be applied to [managing suppliers](#). Refer to section E.6.1 [Classification and vetting](#).

Table 9: Supplier classification example

| Supplier Class |   | Maximum risk potential to be contributed by supplier – refer to <a href="#">Appendix 3: Prospect and Risk Rating System Example</a> | Classification Criteria as judged or likely to be perceived by stakeholders.   |
|----------------|---|---|--|
| High           | 6 | 6   | <a href="#">Supplier</a> of a <a href="#">good</a> or <a href="#">service</a> that is critical to <a href="#">commercial</a> , <a href="#">good/service quality</a> , <a href="#">health</a> , <a href="#">safety</a> , <a href="#">environmental</a> protection or <a href="#">security</a> related to the <a href="#">organisation's performance</a> . |
|                | 5 | 5   |  |
| Medium         | 4 | 4   | <a href="#">Supplier</a> with low or no direct <a href="#">impact</a> on the <a href="#">organisation performance</a> .  |
|                | 3 | 3   |  |
| Low            | 2 | 2   | <a href="#">Supplier</a> with low or no direct <a href="#">impact</a> on the <a href="#">organisation performance</a> .  |
|                | 1 | 1   |  |

### 5.2 Supplier Performance Grades Example

The following grades have been [defined](#) to [record](#) the [performance](#) of [suppliers](#) providing [goods](#) and [services](#). Refer to section E.6.4 [Performance evaluation](#).

Table 10: Supplier performance grades example

| Grade of Supplier Performance | Performance Criteria  |
|-------------------------------|---|
| 2                             | Highly satisfactory – preferred choice.                                   |
| 1                             | Satisfactory – would use again.   |
| 0                             | Insufficient <a href="#">data</a> to make a judgement – use with caution. |
| -1                            | Unsatisfactory – prefer not to use again.                                 |
| -2                            | Highly unsatisfactory – never use again.                                  |

## Appendix 6: General Aspects of an Organisation

The following is a non-exhaustive and not necessarily mutually exclusive list of general [organisation aspects](#) which may be a source of [harm](#) or benefit with respect to [stakeholder needs](#) and [expectations](#) - refer to section E.1.6.3 [Prospect and risk identification](#). They will not necessarily all be applicable to every [organisation](#) and are listed for guidance only under the following subsections:

- [6.1 Personnel Aspects](#)
- [6.2 Commercial Aspects](#)
- [6.3 Data Aspects](#)
- [6.4 Matter and Energy Aspects](#)
- [6.5 Supplier Aspects](#)
- [6.6 Good and Service Delivery Aspects](#)
- [6.7 Contingency Aspects](#)
- [6.8 Change Aspects](#)

### 6.1 Personnel Aspects

- Bullying
- [Communication](#)
- [Competence](#)
- Cooperation
- Coordination
- [Organisation culture](#)
- Death
- Disciplinary [processes](#)
- Discrimination
- Employment [life cycle](#) from recruitment to discharge
- Equality including [gender equality](#)
- [Fitness](#)
- [Human error](#)
- Injury
- [Leadership](#)
- Motivation [arrangements](#)
- [Organisation structure](#)
- [Policy](#)
- [Strategic, tactical](#) and [operational planning](#)
- Special persons e.g. disabled, young, pregnant and nursing mothers
- Supervision
- [Training](#) and mentoring
- [Values](#)
- Violence and disorder
- [Violation](#) of legislation
- [Violation](#) of rules
- [Vision](#)
- [Welfare](#)
- Work pressures
- Working time

## 6.2 Commercial Aspects

- [Assets](#)
- [Asset](#) depreciation
- [Bribery](#)
- [Capital](#)
- Compensation
- Consents and licences
- [Contracts](#) and [stakeholder](#) interactions
- Debt collection
- Fraud
- Financial transactions and [processes](#)
- Insurance
- Legislation
- Loans
- [Marketing](#) including advertising and sales
- Regulation
- Public relations
- Taxation

## 6.3 Data Aspects

- Archiving
- Accidental loss
- [Communication](#)
- [Conventions](#)
- [Confidentiality](#)
- Corruption
- [Cryptography](#)
- Cyber-attack
- Destruction
- [Documents](#)
- [IT software](#)
- Language
- Media
- Passwords
- [Processing](#)
- [Records](#)
- Replication
- Sharing
- Theft
- [Validation](#)
- [Verification](#)

## 6.4 Matter and Energy Aspects

- Accidental loss
- Asbestos
- Barriers
- Biological materials
- Chemicals and dust
- Collision
- Confined spaces

- Containment
- Decay
- Degradation
- Display screen equipment
- Drugs and alcohol
- Electricity
- [Emissions](#)
- Ergonomics
- Equipment
- Explosion
- Exothermic and endothermic reactions
- [Facilities](#)
- Fire
- Ionising and non-ionising radiation
- [IT](#) hardware
- Lighting
- Logistics
- Machinery
- Manual handling
- Noise
- Radiation
- Slipping, tripping and falling
- Toxicity
- Transformation
- Transportation
- Storage
- [Waste](#)
- Water [facilities](#)
- Vehicles
- Vibration

## 6.5 Supplier Aspects

- [Classification](#)
- [Communication](#)
- Location
- [Monitoring](#)
- [Performance](#)
- [Goods](#) and/or services [quality](#)
- [Prospect and risk](#)
- [Validation](#)
- [Values, policy](#) and [strategy](#)

## 6.6 Good and Service Delivery Aspects

- Aesthetics
- Commissioning
- Construction
- Decommissioning
- Delivery
- Demolition
- [Design](#)
- Functionality

- [Quality](#)
- [Risk](#)

## 6.7 Contingency Aspects

- [Crises](#)
- [Emergencies](#)
- [Disaster recovery](#)
- First aid
- Product recall

## 6.8 Change Aspects

- [Contract](#)
- Experiments
- [Management system](#)
- [Nonconformity](#) rectification and [nonconformity disposition](#)
- [Organisation](#)
- Permanent
- Product
- [Project](#)
- [Service](#)
- Temporary

## Appendix 7: Typical Key Performance Indicators

For application, refer to section E.4.3.2 [Indicators](#).

The typical [Key Performance Indicators](#) are [classified](#) according the twelve management topic principal elements described in section A.1.3 [Universal PDCA twelve element structure](#). [As applicable](#), they may each be further subdivided according to facets of [performance](#) of interest to the [organisation's stakeholders](#) such as:

- [Goods](#) and [service quality](#)
- Personnel [health](#), [safety](#) and [welfare](#)
- [Environmental health](#) and [safety](#)
- Financial gain and loss
- Reputation

### 7.1 Assessment and development of controls

- a) None.

### 7.2 Personnel

- a) Personnel sickness – percentage hours off sick of normal working hours.
- b) Personnel overtime – percentage overtime hours as fraction of normal hours.
- c) Personnel turnover – percentage of [employees](#) leaving organisation per year.
- d) Staff vacancies – Number of vacancies.
- e) Personnel employed – number of personnel employed by type (including special classes) and age bands.
- f) Personnel appraisals – percentage completed on time and number outstanding.
- g) [Training](#) – percentage of scheduled [training](#) completed on time.
- h) [Competence](#) – number of personnel with expired [required competence](#).
- i) Succession planning – percentage of key personnel due to retire within next two years and within one year.

### 7.3 Commerce

- a) Bids for new work – number of new bids made for [project](#) work per accounting period.
- b) Successful bids – percentage of successful bids converted to contracts per accounting period.
- c) [Projects](#) started – [project](#) starts per accounting period.
- d) [Projects](#) completions – [project](#) completions per accounting period.
- e) [Projects](#) completed on time – percentage that overrun or are early.
- f) [Projects](#) completed within budget – number by percentage (5%, 10%, 15% etc.) that are over budget and number by percentage (0%, 5%, 10%, 15% etc.) that are under budget.
- g) Repeat work – percentage repeat orders from existing customers.
- h) Financial turnover – financial turnover per accounting periods.
- i) Financial profit – net profit per accounting periods.
- j) Carbon accounting – credit/debit.
- k) Debtors – number and amount.
- l) Loans – outstanding owed by organisation.
- m) Budget – number of significant positive and negative deviations from budget.

## 7.4 Data

- a) Financial accounts – late production of reconciled accounts and audits occurrences, number of discrepancies.
- b) Carbon accounts – late production and audit occurrences, number of discrepancies.
- c) Material asset accounts – late production, discrepancies.
- d) Government bodies submitted reports – number of reports submitted late.

## 7.5 Matter and energy

- a) Business travel – business mileage [classified](#) according to: type of transport, office location, comparison with [projects](#) financial turnover.
- b) Facility occupation – percentage current use of capacity of [facilities](#).
- c) Production capacity – percentage achievement of potential production capacity.
- d) Facility energy use – use of gas, electricity and other types of energy per accounting period, and comparison with previous periods.
- e) Facility water use – use per accounting period and comparison with previous periods.
- f) Facility maintenance, inspection and [testing](#) (including cleanliness) - percentage of maintenance, inspection and [testing](#) schedule requirements completed on time.
- g) Waste – levels of waste production and reuse per accounting period.

## 7.6 Suppliers

- a) Approved suppliers – number of each class.
- b) Supplier performance – number achieving each grade of performance within critical classes.

## 7.7 Normal structures and processes

- a) Production/service capacity – production and/or service capacity and percentage achievement of potential production and/or service capacity.

## 7.8 Contingency structures and processes

- a) [Contingency plans](#) – number awaiting approval.
- b) [Contingency plan](#) exercises – percentage of exercises completed within [required](#) scheduled time by type.
- c) [Contingency plan](#) use – number of uses of [Contingency plans](#) to respond to an [event](#) by type.

## 7.9 Change

- a) Newly approved change [initiatives](#) – number of new approved change [initiatives](#) by type/criticality.
- b) Change [initiatives](#) in progress – number progressing and overdue for completion by type and criticality.
- c) Completed change [initiatives](#) – number completed by type and criticality.
- d) Completed change [initiatives](#) performance – percentage not achieving [objectives](#) or needing further work.

## 7.10 Reactive investigation

- a) Personnel accident frequency rate – number of accidents per 100,000 hours worked per year.
- b) [Environmental](#) incident frequency rate – number of incidents per 100,000 hours worked per year.



- c) Customer complaints and commendations frequency rates – number of complaints and commendations per 100,000 hours worked per year.
- d) Contractual disputes – number of [events](#) by size.
- e) Litigation [events](#) – number of commercial and criminal [events](#).
- f) Near misses – number of recorded near misses recorded and as ratio of actual loss [events](#) by type.

## 7.11 Planned monitoring

- a) [Proactive](#) monitoring completed on time –percentage audits, inspections etc. not completed by scheduled date.
- b) Non-conformities recorded – percentage recorded by type and criticality.
- c) Observations recorded – percentage recorded and percentage accepted by type and potential.
- d) Personnel suggestions – number submitted and percentage accepted by type and potential.

## 7.12 Review and action

- a) Scheduled focused [reviews](#) – percentage completed on time.
- b) Main management [reviews](#) – percentage completed on time.
- c) [Actions](#) – number of principal [actions](#) recorded and percentage completed by [action](#) date by type.

## Appendix 8: Getting started with the MSS

An [organisation's management system](#) is a valuable and critical [asset](#) and its [design](#) and implementation requires [leadership](#), commitment and appropriate resourcing at all levels of the [organisation](#) to be successful. The following issues are intended to prompt the [MSS](#) implementation [project](#) team to focus on the critical issues.

The [process](#) of implementing a new [management system](#) or modifying an existing one should be [managed](#) as a [project](#) under the control of a senior [responsible](#) manager and a dedicated [project](#) team with a detailed [project plan](#) capable of being appropriately [monitored](#) and periodically [reviewed](#).

### 8.1 Foundation Planning

The [organisation](#) should clarify or establish:

- a) Its [purpose](#), [vision](#), [mission](#) and [objectives](#),
- b) The perceived principal benefit(s) or [objective](#) of the proposed new or changed [management system](#),
- c) What parts of the [MSS](#) are applicable to different parts of the organisation and who will be responsible for defining the detailed [arrangements](#) – this may include the assigning of responsibility for [structure and process ownership](#),
- d) The [need](#) for any [covert arrangements](#),
- e) Internal and external [stakeholders](#) that need to be consulted,
- f) What existing [management system](#) elements are [available](#) or can be used from elsewhere and directly made use of,
- g) The level of [MSS](#) compliance to be achieved – refer to section A.5.2 [Compliance award levels](#),
- h) The [management system](#) interfaces and how the [organisation](#) intends to interface with the [MSS](#) e.g. use of proprietary or non- proprietary [IT systems](#) – refer to sections A.7 [MSS User Interfaces](#) and 0 [Data](#).
- i) The [structure](#) of the new or changed [management system](#) and how the transition is intended to be made from that currently existing, if applicable – refer to section E.4.1 [Management system structure](#),
- j) Any [aspects](#) of the [performance](#) of the [organisation](#) or [management system](#) that are [required](#) to receive independent third party [certification](#) – refer to section A.5.4 [Certification](#).

### 8.2 Project Organisation

The [organisation](#) should establish a [project organisation](#) that is suitable and sufficient to [manage](#) the [design](#) and implementation of the new or changed [management system](#) – refer to sections E.7.1.5 [Projects](#), **Error! Reference source not found.** [Organisation](#) and E.2.2 [Responsibilities and authorities](#). It should include the following individually appointed or dual [roles](#) depending on the size and complexity of the [organisation](#):

- a) A representative from [top management](#) to provide overall [leadership](#), commitment, allocation of [resources](#) and liaison with [top management](#).
- b) [Management system representative](#).
- c) A [project manager](#).
- d) Internal and/or external [expert](#) adviser(s), as [required](#) – see C.2.3 [Provision of expert advice and assistance](#) and Table 1: Aid for identifying expert advice and support needs.

The [project organisation](#) may be carried forward to become the on-going team for [managing](#) the [management system](#) on behalf of [top management](#). This then becomes a seamless chain of [projects](#) that maintains and continually improves the [management system](#) within the overall [management](#)

[review](#) and [action process](#). This would normally be [coordinated](#) by the [management system representative](#).

### 8.3 Project Management

The [organisation](#) should:

- a) Decide if the new or revised [management system](#) will be implemented first as a prototype and/or across the whole [organisation](#) in stages or as a single exercise.
- b) Establish an approved [project plan](#) covering the [management system design](#) and implementation with milestones, identified task interdependencies, [resources](#) and interaction with other parties such as [certification](#) bodies.
- c) Assign and [coordinate](#) tasks.
- d) [Monitor](#) and report progress.
- e) [Review](#) progress and take appropriate [action](#) to align/realign [project](#) with [objectives](#), as necessary.

### 8.4 Management System Design

The [organisation's project](#) team under the direction of the [project manager](#) should:

- a) Decide what use is to be made of existing [management system documentation](#).
- b) Define the types of [documents](#) to construct the new or revised [management system](#) architecture – see [Definition of Document Types](#).
- c) Define the overall [management system](#) architecture paying attention to its functionality and elegance.
- d) Populate this [structure](#) by defining the [document](#) titles, scope and responsibility for drafting and approving.
- e) Draft the [management system documents](#) – see section C.4.2.2 [Internal documents](#).
- f) Arrange for [peer review](#) and comment by relevant personnel.
- g) Prepare and approve final [documents](#) see section C.4.2.2 [Internal documents](#).

### 8.5 Management System Implementation

The [organisation's project](#) team under the direction of the [project manager](#) should:

- a) Brief staff and provide suitable and sufficient [training](#) on the new or changed [management system](#).
- b) Obtain approval from [top management](#) to implement the new or revised [management system](#).
- c) Issue new [management system documents](#) in their entirety or in [planned](#) stages.
- d) [Monitor](#) implementation of [management system](#) and provide advice and support as [required](#).
- e) [Monitor](#) compliance using [inspections](#) and [audits](#) etc.
- f) Conduct [management reviews](#), [define actions](#) and close out.
- g) Receive third party [audits](#), [as applicable](#), [define actions](#) and close out.
- h) Establish on-going [organisation structure](#) to [manage](#) the [management system](#) – refer to section **Error! Reference source not found.** [Organisation](#).

## Appendix 9: Comparison with other Standards

The relationship between the [structure](#) of the [MSS](#) and other common standards is shown below in Table 11: MSS relationship with other common standards. The table is divided into the following principal sections corresponding to the structure of the [MSS](#):

- [A. Introduction](#)
- [B/D General Requirements](#)
- [C/E.1 Assessment and Development of Controls](#)
- [C/E.2 Personnel](#)
- [C/E.3 Commerce](#)
- [C/E.4 Data](#)
- [C/E.5 Matter and Energy](#)
- [C/E.6 Suppliers](#)
- [C/E.7 Normal Structures and Processes](#)
- [C/E.8 Contingency Structures and Processes](#)
- [C/E.9 Change](#)
- [C/E.10 Reactive Investigation](#)
- [C/E.11 Planned Monitoring](#)
- [C/E.12 Review and Action](#)
- [Definitions](#)
- [Bibliography](#)
- [Index](#)
- [Appendices](#)

**Table 11: MSS relationship with other common standards**

| MSS REQUIREMENT   | COMMON MANAGEMENT SYSTEM STANDARDS (specifications) |                          |                           |                             |                           |                           |                           |                           |                           |  |                       |  |
|---|---|--------------------------|---------------------------|-----------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--|-----------------------|--|
|   | <a href="#">ISO Annex SL 2012</a>                   | <a href="#">ISO 9001</a> | <a href="#">ISO 14001</a> | <a href="#">OHSAS 18001</a> | <a href="#">ISO 26000</a> | <a href="#">ISO 27001</a> | <a href="#">ISO 27002</a> | <a href="#">ISO 31000</a> | <a href="#">ISO 55001</a> |  | <a href="#">PAS99</a> |  |
| <b><a href="#">A. INTRODUCTION</a></b>                            |   |                          |                           |                             |                           |                           |                           |                           |                           |  |                       |  |
| <a href="#">1. MSS Structure</a>                                  |   |                          |                           |                             |                           |                           |                           |                           |                           |  |                       |  |
| <a href="#">1.1 Context of a Management System</a>                |   |                          |                           |                             | 6.2<br>7                  | A.6.1                     |                           |                           |                           |  |                       |  |
| <a href="#">1.2 Plan-Do-check-Act</a>                             |   |                          |                           |                             |                           |                           |                           | 4.1<br>4.2<br>A.3.1       | 4.4                       |  |                       |  |
| <a href="#">1.3 Universal PDCA Twelve Element Structure</a>       |   |                          |                           |                             |                           |                           |                           |                           |                           |  |                       |  |
| <a href="#">2. Navigation of this document</a>                    |   |                          |                           |                             |                           |                           |                           |                           |                           |  |                       |  |
| <a href="#">3. MSS Scope</a>                                      |   | 1                        | 1                         | 1                           | 1                         |                           | 1                         | 1                         | 1                         |  |                       |  |
| <a href="#">4. Covert arrangements</a>                            |   |                          |                           |                             |                           |                           |                           |                           |                           |  |                       |  |
| <a href="#">5. Compliance, certification and scoring</a>          |   |                          |                           |                             |                           |                           |                           |                           |                           |  |                       |  |
| <a href="#">5.1 Compliance scoring system</a>                     |   |                          |                           |                             |                           |                           |                           |                           |                           |  |                       |  |
| <a href="#">5.2 Compliance award levels</a>                       |   |                          |                           |                             |                           |                           |                           |                           |                           |  |                       |  |
| <a href="#">5.3 Organisation size automatic clause exemptions</a> |   | 4.3                      |                           |                             |                           |                           |                           |                           |                           |  |                       |  |
| <a href="#">5.4 Certification</a>                                 |   |                          |                           |                             | 7.8.4                     |                           |                           | 1                         |                           |  |                       |  |
| <a href="#">6. Management Principles</a>                          |   |                          |                           |                             | 4                         | A.14.2.5                  | 14.2.5                    | 3                         |                           |  |                       |  |
| <b><a href="#">B/D. GENERAL REQUIREMENTS</a></b>                  |   |                          |                           |                             |                           |                           |                           |                           |                           |  |                       |  |
| <a href="#">0.1 Scope of organisation's arrangements</a>          | 1<br>4.3  | 4.3                      | 4.3                       | 4.1<br>4.4.4                | 1                         | 1<br>4.3                  |                           | 1                         | 1<br>4.1<br>4.2<br>4.3    |  | 4.3                   |  |
| <a href="#">0.2 Coherent functionality</a>                        | 4.4<br>5.1<br>6.1                                   |                          | 4.4<br>5.1<br>7.5.1       |                             |                           |                           |                           |                           | 4.1<br>5.1<br>5.2         |  | 4.4<br>5.1            |  |



| MSS REQUIREMENT   | COMMON MANAGEMENT SYSTEM STANDARDS (specifications) |   |                                     |                                |                           |  |   |                              |   |  |                       |
|---|---|---|-------------------------------------|--------------------------------|---------------------------|--|---|------------------------------|---|--|-----------------------|
|   | <a href="#">ISO Annex SL 2012</a>                   | <a href="#">ISO 9001</a>                              | <a href="#">ISO 14001</a>           | <a href="#">OHSAS 18001</a>    | <a href="#">ISO 26000</a> | <a href="#">ISO 27001</a>  | <a href="#">ISO 27002</a>   | <a href="#">ISO 31000</a>    | <a href="#">ISO 55001</a>                       |  | <a href="#">PAS99</a> |
| <a href="#">0.3 Stakeholder specific requirements</a>                                 | 4.2   |   |                                     |                                |                           |  |   |                              | 4.1<br>4.2<br>4.3                               |  | 4.2                   |
| <a href="#">0.4 Application of the MSS</a>  | 4.4   | 4.4.1   | 4.4                                 | 4.1<br>4.4.1<br>4.4.4<br>4.4.6 |                           | 4.4<br>5.1   |   | 1                            | 4.1<br>4.2<br>4.3<br>4.4<br>5.1                 |  | 4.4                   |
| <a href="#">C/E.1 ASSESSMENT AND DEVELOPMENT OF CONTROLS – analysis and synthesis</a> |   |   | 8.1                                 |                                |                           |  |   |                              | 4.4<br>5.1                                      |  | 4.4                   |
| <a href="#">1.1 Foundation planning</a>   | 4.1<br>4.2<br>5.1<br>6.1<br>7.1                     | 4.1<br>4.2<br>4.4.2<br>5.1.2<br>7.1.1<br>8.2.1<br>8.3 | 4.1<br>4.2<br>5.1<br>6.1.1<br>6.1.3 |                                | 5<br>6<br>7               | 4.5.1<br>6.1.1<br>7.1<br>A.8.1.1<br>A.8.1.1<br>A.8.1.2<br>A.17.2.1 | 8.1.1<br>8.1.2<br>8.2<br>8.2.2<br>12.6.1<br>18.1.4  | 4.3.1<br>A.1                 | 4.1<br>4.2<br>4.3<br>5.1<br>5.2<br>5.3<br>6.1   |  | 4.1<br>4.2<br>7.1     |
| <a href="#">1.2 Strategic plan</a>  | 5.1   | 5.1.1<br>7.1.1  | 5.1<br>6.1.3                        | 4.4.1                          | 5<br>6<br>7               | 5.1<br>7.1   |   | 4.2<br>A.1                   | 4.1<br>4.2<br>4.3<br>5.1<br>5.3<br>6.1<br>6.2.1 |  | 5.1                   |
| <a href="#">1.3 Policy statement</a>  | 5.1<br>5.2  | 5.1.1<br>5.2  | 5.1<br>5.2<br>7.4                   | 4.2<br>4.4.1<br>4.4.4<br>9.1.2 | 5<br>6<br>7               | 5.1<br>5.2<br>A.5.1.1<br>A.6.2.1                                   | 5<br>6.2.1  | 4.2<br>4.3.2<br>A.1<br>A.3.5 | 4.1<br>4.3<br>5.1<br>5.2<br>6.2.1               |  | 5.1<br>5.2            |
| <a href="#">1.4 Objectives</a>  | 5.1<br>6.2  | 5.1.1<br>6.2  | 5.1<br>6.1.5<br>6.2.1               | 4.3.3<br>4.4.4                 | 5<br>6<br>7.4.2           | 6.2  |   | 4.2<br>A.1<br>A.3.1          | 4.1<br>4.2<br>5.1<br>5.2<br>6.2.1               |  | 5.1<br>6.2            |
| <a href="#">1.5 Legislation and standards</a>   |   | 5.1.2<br>8.2.2<br>8.6.5                               | 6.1.3<br>9.1.2                      | 4.3.2<br>4.3.3<br>4.5.2        | 5<br>6<br>7               | A.18.1.1   | 18  | 4.2                          | 4.2<br>6.2.1                                    |  |                       |
| <a href="#">1.6 Prospect and risk assessment</a>                                      | 6.1<br>8.1  | 4.4.2<br>5.1.2<br>8.3<br>8.4.2<br>8.6.5               | 6.1.4<br>8.2                        | 4.3.1<br>4.4.7                 | 5<br>6                    | 6.1  | 6.2<br>8.3.2  | 5.4                          | 4.2<br>4.3<br>5.1<br>6.1                        |  | 6.1                   |
| <a href="#">1.6.1 Prospect and risk assessment planning</a>                           |   | 6.1<br>8.6.5  | 6.1.2<br>6.1.3                      |                                | 7.3.2                     | 6.1.1<br>6.1.2   |   | 4.3.2<br>5.3<br>A.2.1        | 4.2<br>4.3<br>5.1<br>6.2.1                      |  |                       |
| <a href="#">1.6.2 Classification of structures and processes</a>                      |   |   |                                     |                                |                           | A.8.2.1<br>A.16.1.4  | 7.1.1<br>8.1.2<br>8.2<br>8.3.1<br>9.4.2<br>11.2.9<br>13.1.3<br>13.2.3<br>16.1.4<br>18.1.3 |                              | 4.2<br>4.3                                      |  |                       |
| <a href="#">1.6.3 Aspect and impact identification</a>                                |   |   |                                     |                                |                           |  |   | 5.4.2                        |   |  |                       |
| <a href="#">1.6.4 Prospect and risk analysis and synthesis</a>                        |   |   |                                     |                                |                           |  |   | 5.4.3<br>5.5                 |   |  |                       |
| <a href="#">1.6.5 Prospect and risk improvement</a>                                   |   | 9.1.1   |                                     | 4.4.6                          |                           | 6.1.1<br>8.3<br>A.13.1<br>A.17.1.1<br>A.17.1.2                     |   | 5.4.4                        |   |  |                       |



| MSS REQUIREMENT   | COMMON MANAGEMENT SYSTEM STANDARDS (specifications) |                              |                           |                              |                           |  |  |                           |                           |  |                       |
|---|---|------------------------------|---------------------------|------------------------------|---------------------------|--|--|---------------------------|---------------------------|--|-----------------------|
|   | <a href="#">ISO Annex SL 2012</a>                   | <a href="#">ISO 9001</a>     | <a href="#">ISO 14001</a> | <a href="#">OHSAS 18001</a>  | <a href="#">ISO 26000</a> | <a href="#">ISO 27001</a>  | <a href="#">ISO 27002</a>  | <a href="#">ISO 31000</a> | <a href="#">ISO 55001</a> |  | <a href="#">PAS99</a> |
|   |   |                              |                           |                              |                           | A.17.2.1   |  |                           |                           |  |                       |
| <a href="#">1.6.6 Prospect and risk improvements analysis and synthesis</a> |   |                              |                           |                              |                           | 6.1.3  |  | 5.4.4                     |                           |  |                       |
| <a href="#">1.6.7 Prospect and risk review</a>                              |   |                              | 6.1.5                     |                              |                           | 8.2<br>A.15.2.1  |  | 5.4.4                     |                           |  |                       |
| <a href="#">1.6.8 Residual prospect, risk and controls acceptance</a>       |   |                              |                           |                              |                           |  |  | 5.4.4                     |                           |  |                       |
| <a href="#">1.7 Performance justification</a>                               |   | 8.6.1<br>9.1.3               |                           |                              |                           |  |  | 5.4.4<br>A.2.2            | 4.2<br>5.1                |  |                       |
| <a href="#">1.8 Management tools and techniques</a>                         |   | 9.1.2<br>9.1.3               |                           |                              |                           |  |  | 5.4.3                     |                           |  |                       |
| <b><a href="#">C/E.2 PERSONNEL</a></b>                                      |   |                              | 5.1                       |                              |                           |  |  | 4.4                       | 4.4<br>5.1                |  |                       |
| <a href="#">2.1 Organisation</a>  |   | 5.1.1<br>7.1.1               | 5.1<br>5.3<br>7.1         | 4.4.1                        |                           | 5.1<br>5.3   | 6.1  | A.3.5                     | 5.1<br>5.3                |  | 5.1                   |
| <a href="#">2.1.2 Remote working</a>  |   |                              |                           |                              |                           | A.6.2.2  | 6.2.2  |                           |                           |  |                       |
| <a href="#">2.2 Responsibilities and authorities</a>                        | 5.1<br>5.3  | 4.4.2<br>5.3                 | 5.3<br>7.2                | 4.4.1                        |                           | 5.1<br>5.3<br>A.6.1.1<br>A.6.1.2<br>A.7.2.1<br>A.8.1.2<br>A.9.1.2<br>A.9.2.1<br>A.9.2.2<br>A.9.2.3<br>A.9.3.1<br>A.9.4<br>A.12.6.2<br>A.16.1.1 | 6.1.1<br>6.1.2<br>7.3.1<br>8.2.1<br>9.2.1<br>9.2.2<br>9.2.3<br>9.2.5<br>11.2.5 | 4.3.3<br>A.3.2<br>A.3.5   | 4.2<br>5.1<br>5.3         |  | 5.3                   |
| <a href="#">2.3 Provision of expert advice and assistance</a>               |   | 5.3<br>7.1.1<br>7.1.5<br>7.2 | 5.3<br>7.1                |                              |                           | 5.1  | 6.1.4  |                           |                           |  |                       |
| <a href="#">2.4 Employment life cycle</a>                                   |   |                              |                           |                              | 6.6                       |  |  |                           |                           |  |                       |
| <a href="#">2.4.1 Recruitment</a>   |   |                              |                           |                              | 6.3                       | A.7.1  | 7.1<br>7.3   |                           |                           |  |                       |
| <a href="#">2.4.2 Induction</a>   | 5.1<br>7.3  | 5.1.1<br>5.2<br>5.3<br>7.3   | 5.1<br>5.2<br>7.3         | 4.4.1<br>4.4.2<br>4.4.3<br>2 | 6.4<br>7.5<br>7.4.1       | 7.3<br>A.7.2.1<br>A.7.2.2<br>A.7.2.3<br>A.9.3.1<br>A.11.2.9  | 7.2.1<br>7.2.2<br>7.2.3<br>7.3<br>8.1.3  |                           | 5.1<br>5.3<br>6.2.1       |  | 7.3                   |
| <a href="#">2.4.3 Appointment</a>   |   |                              |                           |                              |                           | A.7.3<br>A.13.2.4  | 9.2.1<br>9.2.2<br>9.2.3<br>13.2.4  |                           | 5.3                       |  |                       |
| <a href="#">2.4.4 Competence</a>  | 7.2   | 7.2<br>8.6.1                 |                           | 4.4.1<br>4.4.2               |                           | 7.1<br>7.3<br>A.7.2.2  |  |                           |                           |  | 7.2                   |
| <a href="#">2.4.4.1 Competence, education and training needs</a>            | 7.3   | 5.1.1<br>7.1.5<br>7.2        | 7.2                       |                              | 7.4.1                     |  |  |                           | 5.1<br>5.3                |  |                       |
| <a href="#">2.4.4.2 Competence development and assessment</a>               |   | 7.2                          |                           |                              |                           |  |  |                           | 5.3                       |  |                       |
| <a href="#">2.4.4.3 Education and training program evaluation</a>           |   |                              |                           |                              |                           | 7  |  |                           |                           |  |                       |
| <a href="#">2.4.4.4 Fitness</a>   |   |                              |                           |                              | 6.3                       |  |  |                           |                           |  |                       |
| <a href="#">2.4.5 Welfare</a>   |   |                              |                           |                              | 6.3                       |  |  |                           |                           |  |                       |
| <a href="#">2.4.6 Work absence and rehabilitation</a>                       |   |                              |                           |                              | 6.3                       |  |  |                           |                           |  |                       |
| <a href="#">2.4.7 Post or role change</a>                                   |   |                              |                           |                              |                           |  |  |                           | 5.3                       |  |                       |
| <a href="#">2.4.8 Discipline</a>  | 7.3   |                              |                           |                              | 6.3                       | A.7.2.3  | 7.2.3  |                           |                           |  |                       |
| <a href="#">2.4.9 Leaving</a>   |   |                              |                           |                              | 6.3                       | A.7.3<br>A.8.1.4   | 7.3<br>8.1.4   |                           |                           |  |                       |



| COMMON MANAGEMENT SYSTEM STANDARDS (specifications)                                      |                                   |                                       |                              |                             |                                 |   |                                    |                           |                           |       |  |                       |  |
|--|-----------------------------------|---------------------------------------|------------------------------|-----------------------------|---------------------------------|---|------------------------------------|---------------------------|---------------------------|-------|--|-----------------------|--|
| MSS REQUIREMENT  | <a href="#">ISO Annex SL 2012</a> | <a href="#">ISO 9001</a>              | <a href="#">ISO 14001</a>    | <a href="#">OHSAS 18001</a> | <a href="#">ISO 26000</a>       | <a href="#">ISO 27001</a>   | <a href="#">ISO 27002</a>          | <a href="#">ISO 31000</a> | <a href="#">ISO 55001</a> |       |  | <a href="#">PAS99</a> |  |
|  |                                   |                                       |                              |                             |                                 | A.9.2.6   | 9.2.1<br>9.2.2<br>9.2.6            |                           |                           |       |  |                       |  |
| <a href="#">2.5 Personnel Interactions</a>   |                                   |                                       |                              | 4.4.3                       |                                 |   |                                    |                           |                           |       |  |                       |  |
| <a href="#">2.5.1 Interfaces</a>   |                                   |                                       |                              |                             | 5<br>6.8                        | A.6.1.3<br>A.6.1.4<br>A.13.2  | 6.1.3<br>6.1.4<br>12.1.2<br>13.2.2 |                           |                           |       |  |                       |  |
| <a href="#">2.5.2 Communication, consultation, participation and reporting</a>           | 5.1<br>5.3<br>7.4                 | 5.2<br>7.4<br>8.2.1<br>8.2.4<br>8.4.3 | 7.3<br>7.4.1<br>8.2          | 4.4.1                       | 5<br>7.5<br>7.6                 | 5.1<br>A.5.1.1<br>A.16.1.2  | 13<br>16.1.2<br>A.13.2             | A.3.4                     | 4.2<br>5.3                | 6.2.1 |  | 7.4                   |  |
| <a href="#">2.5.2.1 Internal communication, participation and consultation</a>           |                                   | 5.3<br>6.2                            | 5.2<br>6.2.1<br>7.4<br>7.4.2 | 4.4.3.<br>1<br>4.4.3.<br>2  | 5                               | 9.2<br>A.7.2.3<br>A.16.1.3  |                                    | 4.3.6<br>5.2              | 4.2                       |       |  |                       |  |
| <a href="#">2.5.2.2 External communication consultation, participation and reporting</a> |                                   |                                       | 7.4.3                        | 4.4.3.<br>1                 | 5<br>6.8<br>7.7.4               | A.6.1.3   | 6.1.3                              | 4.3.7<br>5.2              | 4.2                       |       |  |                       |  |
| <a href="#">2.5.3 Management of conflict</a>   |                                   |                                       |                              |                             | 7.6.3                           |   | 6.1.2                              |                           |                           |       |  |                       |  |
| <b><a href="#">C/E.3 COMMERCE</a></b>  |                                   |                                       |                              |                             |                                 |   |                                    | 4.4                       | 4.4<br>5.1                |       |  |                       |  |
| <a href="#">3.1 Entity maintenance</a>   |                                   |                                       |                              |                             | 7.6                             | A.6.1.3<br>A.6.1.4  | 6.1.4                              |                           |                           |       |  |                       |  |
| <a href="#">3.2 Marketing</a>  |                                   | 8.2.1<br>8.3                          | 7.4.3                        |                             | 6.7                             |   |                                    |                           |                           |       |  |                       |  |
| <a href="#">3.3 Contracts</a>  |                                   | 8.2.3<br>8.4.3<br>8.6.3               |                              | 4.4.6                       | 6.3<br>6.4<br>6.6<br>6.7<br>7.3 | A.7.1.2<br>A.13.2.4<br>A.15.1.2<br>A.15.1.3<br>A.18.1.1<br>A.18.1.2   | 7.1.2                              |                           |                           |       |  | 8.1                   |  |
| <a href="#">3.3.1 Pre-Contract</a>   |                                   | 8.2.3                                 |                              |                             |                                 |   |                                    |                           |                           |       |  |                       |  |
| <a href="#">3.3.2 Failure to establish a contract</a>                                    |                                   |                                       |                              |                             |                                 |   |                                    |                           |                           |       |  |                       |  |
| <a href="#">3.3.3 Contract implementation</a>  |                                   | 8.2.3<br>8.6.5                        |                              |                             |                                 | A.9.2.6<br>A.15.2.1   |                                    |                           |                           |       |  |                       |  |
| <a href="#">3.3.4 Post Contract</a>  |                                   | 8.6.5                                 |                              |                             |                                 |   |                                    |                           |                           |       |  |                       |  |
| <a href="#">3.4 Finance</a>  |                                   |                                       |                              |                             |                                 |   |                                    |                           |                           |       |  |                       |  |
| <a href="#">3.4.1 Revenue</a>  |                                   |                                       |                              |                             |                                 |   |                                    |                           |                           |       |  |                       |  |
| <a href="#">3.4.2 Payments</a>   |                                   |                                       |                              |                             |                                 |   |                                    |                           |                           |       |  |                       |  |
| <a href="#">3.4.3 Banking and cash</a>   |                                   |                                       |                              |                             |                                 |   |                                    |                           |                           |       |  |                       |  |
| <b><a href="#">C/E.4 DATA</a></b>  |                                   |                                       | 7.5<br>8.1                   |                             |                                 | 7.5<br>A.8.1.3  |                                    | 4.4                       | 4.4<br>5.1                |       |  |                       |  |
| <a href="#">4.1 Management system structure</a>  | 7.5.1                             | 5.1.1<br>5.2<br>7.5.1                 | 5.2<br>7.5.1                 | 4.4.1<br>4.4.4              |                                 | 7.5.1<br>A.8.2.3<br>A.9.1.1<br>A.10.1.1<br>A.11.1.5<br>A.12.1.1<br>A.12.5<br>A.12.6.2<br>A.14.2.1<br>A.16.1.5<br>A.17.1.2<br>A.18.1.2 | 12.1.1                             | A.3.5                     | 4.3<br>4.4<br>5.1         |       |  | 7.5.1                 |  |
| <a href="#">4.2 Data control</a>   | 7.5.3                             | 7.5.3                                 |                              | 4.4.5                       |                                 | A.8.2.3<br>A.14.3   | 6.2<br>8.2.3<br>9.2<br>10          |                           | 4.2                       |       |  | 7.5.2<br>7.5.3        |  |
| <a href="#">4.2.1 Databases</a>  |                                   |                                       |                              |                             |                                 |   |                                    |                           | 4.2<br>4.3                |       |  |                       |  |
| <a href="#">4.2.2 Internal documents</a>   | 7.5.2                             | 7.5.3<br>8.6.1                        | 7.5.2<br>7.5.3               |                             |                                 | 7.5.2<br>7.5.3  | 12.1.1                             |                           | 4.2<br>4.3<br>4.4         |       |  |                       |  |



| MSS REQUIREMENT   | COMMON MANAGEMENT SYSTEM STANDARDS (specifications) |   |                           |                             |                           |  |  |                           |                           |  |                                  |
|---|---|---|---------------------------|-----------------------------|---------------------------|--|--|---------------------------|---------------------------|--|----------------------------------|
|   | <a href="#">ISO Annex SL 2012</a>                   | <a href="#">ISO 9001</a>                | <a href="#">ISO 14001</a> | <a href="#">OHSAS 18001</a> | <a href="#">ISO 26000</a> | <a href="#">ISO 27001</a>  | <a href="#">ISO 27002</a>  | <a href="#">ISO 31000</a> | <a href="#">ISO 55001</a> |  | <a href="#">PAS99</a>            |
| <a href="#">4.2.3 External documents</a>                              |   | 7.5.3                                   | 7.5.2<br>7.5.3            |                             |                           | 7.5.2<br>7.5.3   |  |                           | 5.1<br>4.2                |  |                                  |
| <a href="#">4.2.4 Library</a>   |   |   |                           |                             |                           |  |  |                           |                           |  |                                  |
| <a href="#">4.2.5 Contract documents and data</a>                     |   |   |                           |                             |                           |  |  |                           | 4.2                       |  |                                  |
| <a href="#">4.2.6 Infrastructure and goods documentation and data</a> |   |   |                           |                             |                           |  |  |                           | 4.2<br>4.3                |  |                                  |
| <a href="#">4.2.7 Marketing materials and website</a>                 |   |   |                           |                             |                           |  |  |                           |                           |  |                                  |
| <a href="#">4.2.8 Computer software</a>                               |   |   |                           |                             |                           | A.12.5<br>A.12.6.2<br>A.14.2.4   | 9.4.5<br>12.5  |                           | 4.2                       |  |                                  |
| <a href="#">4.2.9 Records</a>   |   | 8.1<br>8.2.3<br>8.4.2<br>8.6.6<br>9.1.1 | 6.1.3<br>7.5.3<br>9.1.1   | 4.4.4<br>4.5.2<br>4.5.4     |                           | 7.2<br>8.1<br>8.2<br>9.2<br>A.12.4.2<br>A.12.4.3<br>A.16.1.7<br>A.18.1.3   | 8.2.3<br>8.3<br>12.1.2<br>12.4.1<br>12.4.2<br>12.4.3<br>12.4.4<br>14.3.1 | 5.7                       | 4.2<br>4.3                |  | 8.1<br>9.1<br>9.2<br>9.3<br>10.1 |
| <a href="#">4.2.10 Access</a>   | 7.5.3   | 7.5.3                                   |                           |                             |                           | A.9.1.2<br>A.9.2.1<br>A.9.2.2<br>A.9.2.3<br>A.9.2.4<br>A.9.4<br>A.10.1<br>A.12.4.2<br>A.13.2.4<br>A.18.1.4<br>A.18.1.5 | 8.2.3<br>9<br>10<br>18.1.4<br>18.1.4                                     |                           | 4.2                       |  |                                  |
| <a href="#">4.2.11 Loss and corruption</a>                            |   | 7.5.3                                   |                           |                             |                           | A.12.2<br>A.12.3.1<br>A.12.4.2<br>A.12.4.3   | 12.2<br>12.3<br>18.1.4   |                           |                           |  |                                  |
| <a href="#">4.3 Data Processing</a>                                   | 7.5.3   |   |                           |                             |                           |  | 8.2.3<br>8.3.1<br>12.1.1   |                           |                           |  |                                  |
| <a href="#">4.3.1 Accounts</a>  |   |   |                           |                             |                           |  |  |                           | 4.2                       |  |                                  |
| <a href="#">4.3.2 Indicators</a>                                      |   | 9.1.1<br>9.1.2<br>9.1.3                 |                           | 4.5.1                       |                           |  |  |                           | 4.2                       |  |                                  |
| <a href="#">4.4 Conventions</a>                                       | 7.5.2   | 8.6.2                                   |                           |                             |                           |  |  |                           |                           |  |                                  |
| <a href="#">4.4.1 Style</a>   |   |   |                           |                             |                           |  |  |                           |                           |  | 7.5.2                            |
| <a href="#">4.4.2 Nomenclature</a>                                    |   |   |                           |                             |                           | A.8.2.2  | 8.2.2<br>8.2.3   |                           |                           |  |                                  |
| <a href="#">4.4.3 Dimensions</a>                                      |   |   |                           |                             |                           |  |  |                           |                           |  |                                  |
| <a href="#">4.4.4 Language</a>  |   |   |                           | 4.4.2                       |                           |  |  |                           |                           |  | 7.5.2                            |
| <b><a href="#">C/E.5 MATTER AND ENERGY</a></b>                        |   |   |                           | 4.4.6                       |                           |  |  | 4.4                       | 4.4<br>5.1                |  |                                  |
| <a href="#">5.1 Selection and combination</a>                         |   |   |                           |                             |                           |  |  |                           |                           |  |                                  |
| <a href="#">5.2 Handling and use</a>                                  |   |   |                           |                             |                           | A.8.2.3  | 6.2<br>8.2.3<br>8.3  |                           |                           |  |                                  |
| <a href="#">5.2.1 Receipt</a>   |   |   |                           |                             |                           |  |  |                           |                           |  |                                  |
| <a href="#">5.2.2 Transport</a>                                       |   |   |                           |                             |                           | A.8.3.3  | 6.2<br>8.3.3   |                           |                           |  |                                  |
| <a href="#">5.2.3 Storage</a>   |   |   |                           |                             |                           |  | 6.2<br>8.3.1   |                           |                           |  |                                  |
| <a href="#">5.3 Processing</a>  |   |   |                           |                             |                           |  |  |                           |                           |  |                                  |
| <a href="#">5.4 Infrastructure</a>                                    |   | 7.1.2                                   |                           |                             |                           |  |  |                           | 11.1.4                    |  |                                  |
| <a href="#">5.4.1 Facilities</a>                                      |   |   |                           |                             |                           | A.11.2.1<br>A.11.2.2<br>A.11.2.3   | 11.1.3<br>11.1.6   |                           |                           |  |                                  |
| <a href="#">5.4.2 Work environment</a>                                |   | 7.1.3                                   |                           |                             |                           | A.11.2.9   | 5.4.2  |                           |                           |  |                                  |



| COMMON MANAGEMENT SYSTEM STANDARDS (specifications)                  |                                   |  |                           |                             |                           |  |                                |                           |                           |  |          |                       |
|--|-----------------------------------|--|---------------------------|-----------------------------|---------------------------|--|--------------------------------|---------------------------|---------------------------|--|----------|-----------------------|
| MSS REQUIREMENT  | <a href="#">ISO Annex SL 2012</a> | <a href="#">ISO 9001</a>                       | <a href="#">ISO 14001</a> | <a href="#">OHSAS 18001</a> | <a href="#">ISO 26000</a> | <a href="#">ISO 27001</a>  | <a href="#">ISO 27002</a>      | <a href="#">ISO 31000</a> | <a href="#">ISO 55001</a> |  |          | <a href="#">PAS99</a> |
|  |                                   |  |                           |                             |                           | A.12.1.4<br>A.14.2.6   | 6.2<br>11.2.9<br>12.1.4        |                           |                           |  |          |                       |
| <a href="#">5.4.3 Plant and equipment</a>                            |                                   | 8.6.1  |                           |                             |                           | A.11.2.8   | 11.2                           |                           |                           |  |          |                       |
| <a href="#">5.4.3.1 Personal equipment</a>                           |                                   |  |                           |                             |                           |  |                                |                           |                           |  |          |                       |
| <a href="#">5.4.3.2 Monitoring and measuring equipment</a>           |                                   | 7.1.4<br>8.6.1                                 |                           |                             |                           |  |                                |                           |                           |  |          |                       |
| <a href="#">5.4.3.3 Contingency equipment</a>                        |                                   |  |                           |                             |                           |  | 12.1.1                         |                           |                           |  |          |                       |
| <a href="#">5.4.3.4 Data equipment</a>                               |                                   |  |                           |                             |                           | A.6.2<br>A.8.1.3<br>A.8.3.1<br>A.9.4<br>A.12.4.4<br>A.13.1   | 5.4.3.4<br>8.3<br>11.2<br>13.1 |                           |                           |  |          |                       |
| <a href="#">5.4.3.5 Mobile plant and equipment</a>                   |                                   |  |                           |                             |                           | A.6.1<br>A.11.2.5<br>A.11.2.6  |                                |                           |                           |  |          |                       |
| <a href="#">C.5.4.3.6. External fixed plant and equipment</a>        |                                   |  |                           |                             |                           | A.11.2.3   |                                |                           |                           |  |          |                       |
| <a href="#">5.4.4 Configuration</a>                                  |                                   |  |                           |                             |                           |  |                                |                           |                           |  |          |                       |
| <a href="#">5.4.5 Access, egress and protective barriers</a>         |                                   |  |                           |                             |                           | A.8.3.3<br>A.9.1.2<br>A.9.4<br>A.11  | 9<br>11                        |                           |                           |  |          |                       |
| <a href="#">5.5 Maintenance, inspection, testing and calibration</a> |                                   |  |                           | 4.5.1                       |                           | A.11.2.4<br>A.14.2.8<br>A.14.2.9<br>A.14.3   | 11.2.4<br>14                   |                           |                           |  | 9.1      |                       |
| <a href="#">5.5.1 Proactive maintenance, inspection and testing</a>  |                                   |  |                           |                             |                           |  |                                |                           |                           |  |          |                       |
| <a href="#">5.5.2 Reactive maintenance, inspection and testing</a>   |                                   |  |                           |                             |                           |  |                                |                           |                           |  |          |                       |
| <a href="#">5.5.3 Calibration</a>                                    |                                   |  |                           |                             |                           |  |                                |                           |                           |  |          |                       |
| <a href="#">5.6 Waste and emissions</a>                              |                                   |  |                           |                             |                           | A.8.3.2<br>A.11.2.7  | 8.3.2<br>11.2.7                |                           |                           |  |          |                       |
| <b><a href="#">C.6/E.6 SUPPLIERS</a></b>                             | 8.1                               | 8.1<br>8.4.1                                   | 8.1<br>8.2                | 4.4.6                       | 7.3.3<br>7.5.3            | 8.1<br>A.6.1.4<br>A.14.2.7<br>A.15   | 8.3.2<br>8.3.3<br>12.2.7<br>15 | 4.4                       | 4.4<br>5.1                |  | 8.1      |                       |
| <a href="#">6.1 Classification, vetting and control</a>              |                                   | 8.4.2  |                           |                             |                           |  |                                |                           |                           |  |          |                       |
| <a href="#">6.2 Specification and ordering</a>                       |                                   | 8.4.2<br>8.4.3                                 |                           |                             |                           |  |                                |                           |                           |  |          |                       |
| <a href="#">6.3 Receipt</a>  |                                   |  |                           |                             |                           |  |                                |                           |                           |  |          |                       |
| <a href="#">6.4 Performance evaluation</a>                           |                                   | 8.4.2<br>8.4.3                                 |                           |                             |                           | A.15.2.1   |                                |                           |                           |  |          |                       |
| <b><a href="#">C/E.7 NORMAL STRUCTURES AND PROCESSES</a></b>         | 8.1                               | 4.4.2  | 8.1                       | 4.4.6                       | 7.6.3                     |  |                                | 4.4                       | 4.4<br>5.1                |  | 4.4<br>8 |                       |
| <a href="#">7.1 Structure and process design and development</a>     |                                   | 8.5.1<br>8.5.2                                 | 6.1.5<br>8.2              |                             |                           | 8.1<br>A.8.2.3<br>A.11.1.5<br>A.11.1.6<br>A.12.1.3<br>A.13.1<br>A.14.1<br>A.14.2<br>A.14.2.5<br>A.14.2.6<br>A.14.2.8<br>A.14.2.9 | 14                             | 4.3.4<br>4.3.5            |                           |  | 8.1      |                       |
| <a href="#">7.1.1 Structure and process definition</a>               |                                   | 4.4.2<br>5.1.2<br>8.1<br>8.2.2<br>8.3<br>8.4.1 | 8.2                       |                             |                           | A.12.1.3   | 12.1.3<br>14.1.1               |                           |                           |  | 8.1      |                       |



| COMMON MANAGEMENT SYSTEM STANDARDS (specifications)                       |                                       |   |                           |                             |                           |   |                            |                           |                           |  |           |                       |
|---|---------------------------------------|---|---------------------------|-----------------------------|---------------------------|---|----------------------------|---------------------------|---------------------------|--|-----------|-----------------------|
| MSS REQUIREMENT   | <a href="#">ISO Annex SL 2012</a>     | <a href="#">ISO 9001</a>  | <a href="#">ISO 14001</a> | <a href="#">OHSAS 18001</a> | <a href="#">ISO 26000</a> | <a href="#">ISO 27001</a>   | <a href="#">ISO 27002</a>  | <a href="#">ISO 31000</a> | <a href="#">ISO 55001</a> |  |           | <a href="#">PAS99</a> |
|   |                                       | 8.5.1<br>8.5.2<br>8.6.1<br>8.6.2<br>8.6.3<br>8.6.4<br>8.6.5             |                           |                             |                           |   |                            |                           |                           |  |           |                       |
| <a href="#">7.1.2 Repetitive and frequently conducted processes</a>       |                                       |   |                           |                             |                           |   |                            |                           |                           |  |           |                       |
| <a href="#">7.1.3 Non-repetitive and infrequently conducted processes</a> |                                       |   |                           |                             |                           |   |                            |                           |                           |  |           |                       |
| <a href="#">7.1.4 Significant prospect and risk systems of work</a>       |                                       |   |                           |                             |                           |   |                            |                           |                           |  |           |                       |
| <a href="#">7.1.5 Projects</a>  |                                       |   |                           |                             |                           | A.6.1.5   | 6.1.5                      |                           |                           |  |           |                       |
| <a href="#">7.1.6 Goods and services design and development</a>           |                                       |   |                           |                             |                           |   |                            |                           |                           |  |           |                       |
| <a href="#">7.1.7 Measurement and testing</a>                             |                                       | 8.6.1   |                           |                             |                           |   | 12.2.9                     |                           |                           |  |           |                       |
| <a href="#">7.2 Structure and process implementation</a>                  |                                       | 8.1<br>8.3<br>8.5.3<br>8.6.1<br>8.6.2<br>8.6.3<br>8.6.4<br>8.6.5<br>8.7 |                           |                             |                           | A.8.2.3   |                            |                           |                           |  |           |                       |
| <a href="#">7.3 Structure and process cessation</a>                       |                                       |   |                           |                             |                           | A.8.2.3<br>A.8.3.2  | 8.3.2<br>11.2.7            |                           |                           |  |           |                       |
| <b><a href="#">C/E.8 CONTINGENCY STRUCTURES AND PROCESSES</a></b>         |                                       |   |                           | 4.4.7                       | 7.6.3                     | A.16.1  | 6.1.3<br>12.1.2            | 4.4                       | 4.4<br>5.1                |  |           |                       |
| <a href="#">8.1 Contingency planning</a>                                  |                                       |   | 6.1.5                     |                             |                           | A.17.1.1<br>A.17.2.1  | 16                         |                           |                           |  |           |                       |
| <a href="#">8.2 Contingency arrangements</a>                              |                                       |   |                           |                             |                           | A.8.2.3   |                            |                           |                           |  |           |                       |
| <a href="#">8.2.1 Nonconformity</a>                                       | 10.1                                  | 8.8<br>10.1   | 10.1                      |                             |                           |   | 16.1.3                     |                           |                           |  |           |                       |
| <a href="#">8.2.2 Emergencies, Crises and Disaster Recovery</a>           |                                       |   | 8.3                       |                             | 7.5.3                     | A.16.1.2<br>A.17.1.2  | 16<br>17                   |                           |                           |  |           |                       |
| <a href="#">8.2.3 Intentionally halted processes</a>                      |                                       |   |                           |                             |                           |   |                            |                           |                           |  |           |                       |
| <a href="#">8.2.4 Defect notification and recall</a>                      |                                       | 8.8   |                           |                             |                           |   |                            |                           |                           |  |           |                       |
| <a href="#">8.2.5 Insurance</a>   |                                       |   |                           |                             |                           |   |                            |                           |                           |  |           |                       |
| <a href="#">8.2.6 Project contingency arrangements</a>                    |                                       |   |                           |                             |                           |   |                            |                           |                           |  |           |                       |
| <a href="#">8.3 Contingency arrangements testing</a>                      |                                       |   |                           |                             |                           | A.17.1.3  |                            |                           |                           |  |           |                       |
| <a href="#">8.4 Contingency arrangements training</a>                     |                                       |   |                           |                             |                           |   |                            |                           |                           |  |           |                       |
| <a href="#">8.5 Event response</a>  |                                       |   |                           |                             |                           | A.16.1.2<br>A.16.1.5<br>A.17.1.2  | 16.1.2<br>16.1.5           |                           |                           |  |           |                       |
| <b><a href="#">C/E.9 CHANGE</a></b>                                       | 7.5.2<br>7.5.3<br>8.1<br>10.1<br>10.2 | 4.4.1<br>4.4.2<br>6.3<br>8.1<br>8.6.6<br>10.2                           | 8.1<br>10.2               | 4.3.1                       | 7.6.3<br>7.8.3            | 5.1<br>8.1<br>8.2<br>10.2<br>A.6.1.2<br>A.8.2.3<br>A.12.1.2<br>A.12.1.4<br>A.14.2.2<br>A.14.2.4<br>A.14.2.5<br>A.15.2.1<br>A.18.2 | 12.1.2<br>14.2.2<br>14.2.4 |                           | 4.4<br>5.1                |  | 8.1<br>10 |                       |



| MSS REQUIREMENT  | COMMON MANAGEMENT SYSTEM STANDARDS (specifications) |  |   |   |                           |  |                            |                           |                            |  |                       |
|--|---|--|---|---|---------------------------|--|----------------------------|---------------------------|----------------------------|--|-----------------------|
|  | <a href="#">ISO Annex SL 2012</a>                   | <a href="#">ISO 9001</a>                 | <a href="#">ISO 14001</a>                     | <a href="#">OHSAS 18001</a>                   | <a href="#">ISO 26000</a> | <a href="#">ISO 27001</a>                                | <a href="#">ISO 27002</a>  | <a href="#">ISO 31000</a> | <a href="#">ISO 55001</a>  |  | <a href="#">PAS99</a> |
| <a href="#">9.1 Change life cycle</a>                            |   |  | 5.1<br>7.4.2                                  |   |                           | A.14.2.3   |                            |                           |                            |  | 10.2                  |
| <a href="#">9.2 Corrective and preventive action</a>             | 10.1  | 8.8<br>10.1                              | 10.1  | 4.5.3.<br>2                                   |                           | 10.1   |                            |                           |                            |  | 10.1                  |
| <a href="#">9.3 Strategic and tactical change</a>                |   |  |   |   |                           |  |                            |                           |                            |  |                       |
| <a href="#">9.4 Operational structure and process change</a>     |   |  | 8.1   |   |                           |  |                            |                           |                            |  |                       |
| <a href="#">9.5 Project change</a>                               |   |  |   |   |                           |  |                            |                           |                            |  |                       |
| <a href="#">9.6 Management system change</a>                     |   |  |   |   |                           |  |                            |                           |                            |  |                       |
| <b><a href="#">C/E.10 REACTIVE INVESTIGATION</a></b>             | 6.1<br>10.2   | 8.6.5<br>9.1.2<br>10.2                   | 6.1.5   | 4.5<br>4.5.1<br>4.5.3.<br>2                   |                           | 10.1<br>A.15.2.1   | 12.4<br>16.1.6             |                           | 4.4<br>5.1<br>6.2.1        |  |                       |
| <a href="#">10.1 Internal reactive investigation</a>             |   | 8.1                                      |   | 4.5.3.<br>1                                   |                           | A.12.4.1<br>A.12.6.1                                     |                            |                           |                            |  | 9.1                   |
| <a href="#">10.1.1 Evidence preservation</a>                     |   |  |   |   |                           | A.16.1.3<br>A.16.1.7                                     | 12.4.1<br>12.4.2<br>16.1.7 |                           |                            |  |                       |
| <a href="#">10.1.2 Evidence reporting</a>                        |   |  |   |   |                           | A.16.1.3   |                            |                           |                            |  |                       |
| <a href="#">10.1.3 Investigation and analysis of root causes</a> |   |  |   |   |                           | A.16.1.4<br>A.16.1.6                                     |                            |                           |                            |  |                       |
| <a href="#">10.1.3.1 Event classification</a>                    |   |  |   |   |                           |  |                            |                           |                            |  |                       |
| <a href="#">10.1.3.2 Root cause classification</a>               |   |  |   |   |                           |  |                            |                           |                            |  |                       |
| <a href="#">10.2 External reactive investigation</a>             |   |  |   |   |                           |  |                            | 4.5<br>5.6                |                            |  | 9.1                   |
| <b><a href="#">C/E.11 PLANNED MONITORING</a></b>                 | 6.1<br>9.1<br>10.2                                  | 4.4.2<br>5.1.1<br>9.1.1<br>9.1.2<br>10.2 | 5.1<br>6.1.5<br>6.2.1<br>9.1.1                | 4.5<br>4.5.1                                  | 7.7.2                     | A.17.1.3   | 12.1.1<br>12.7             |                           | 4.4<br>5.1<br>5.3<br>6.2.1 |  | 4.4                   |
| <a href="#">11.1 Monitoring planning</a>                         |   | 9.1.1                                    | 9.1.1   |   |                           | 9.1<br>9.2<br>A.12.1.3<br>A.12.7<br>A.14.2.7<br>A.15.2.1 | 8.3.1<br>12.7.1<br>14.2.7  |                           |                            |  | 9.1                   |
| <a href="#">11.2 Internal audit</a>                              | 9.2   | 9.2                                      | 9.2   | 4.5.5   |                           | 9.2  |                            |                           |                            |  | 9.2                   |
| <a href="#">11.3 External audit</a>                              |   |  |   |   |                           |  |                            |                           |                            |  |                       |
| <a href="#">11.4 Independent audit and surveillance</a>          |   |  |   |   |                           |  |                            |                           |                            |  |                       |
| <a href="#">11.5 Inspection</a>                                  |   |  |   |   |                           |  |                            |                           |                            |  |                       |
| <a href="#">11.6 Survey and benchmarking</a>                     |   |  |   |   |                           |  |                            | 5.6<br>A.3.1<br>A.3.5     |                            |  |                       |
| <a href="#">11.7 Self-monitoring and vigilance</a>               |   |  |   |   |                           |  |                            | 4.5                       |                            |  |                       |
| <b><a href="#">C/E.12 REVIEW AND ACTION</a></b>                  | 5.1<br>6.1<br>9.1<br>9.3<br>10.1<br>10.2            | 4.1<br>9.1.2<br>9.3<br>10.2              | 6.1.5<br>6.2.2<br>7.4.2<br>8.3<br>9.3<br>10.2 | 4.3.3<br>4.4.7<br>4.5.1<br>4.5.3.<br>2<br>4.6 | 7.6.3<br>7.7.3<br>7.8.3   | A.16.1.6<br>A.17.1.3<br>A.18.2                           | 5.1.2                      | 4.6<br>A.3.3              | 4.4<br>5.1<br>6.2.1        |  | 4.4<br>9.3            |
| <a href="#">12.1 Review scheduling</a>                           |   |  | 9.1.2   | 4.5.2   |                           | A.5.1.2<br>A.9.2.5<br>A.12.1.3<br>A.15.2.1               | 18.2                       | 4.6                       |                            |  |                       |
| <a href="#">12.2 Review</a>                                      |   |  |   |   |                           |  | 9.2.1<br>9.2.5             | 2<br>5.4.1                |                            |  | 9.1<br>10.2<br>10.2   |
| <a href="#">12.3 Review output and action</a>                    |   | 4.4.1<br>4.4.2<br>5.2<br>8.1             |   |   | 7.6.2                     | 5.1  |                            |                           |                            |  |                       |
| <a href="#">12.4 Action realization</a>                          |   |  |   |   |                           |  |                            |                           |                            |  |                       |
| <b>DEFINITIONS</b>   | 3   | 3  | 3   | 3   | 2                         | 3  | 3                          |                           | 3                          |  | 3                     |
| <a href="#">Definition of Acronyms</a>                           |   |  |   |   |                           |  |                            |                           |                            |  |                       |



| MSS REQUIREMENT  | COMMON MANAGEMENT SYSTEM STANDARDS (specifications) |                          |                           |                             |                           |                           |                           |                           |                           |  |  |                       |  |
|--|---|--------------------------|---------------------------|-----------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--|--|-----------------------|--|
|  | <a href="#">ISO Annex SL 2012</a>                   | <a href="#">ISO 9001</a> | <a href="#">ISO 14001</a> | <a href="#">OHSAS 18001</a> | <a href="#">ISO 26000</a> | <a href="#">ISO 27001</a> | <a href="#">ISO 27002</a> | <a href="#">ISO 31000</a> | <a href="#">ISO 55001</a> |  |  | <a href="#">PAS99</a> |  |
| <a href="#">Definition of Document Types</a>                                   |   |                          |                           |                             |                           |                           |                           |                           |                           |  |  |                       |  |
| <a href="#">Definition of General Terms</a>                                    |   |                          |                           |                             |                           |                           |                           |                           |                           |  |  |                       |  |
| <b><a href="#">BIBLIOGRAPHY</a></b>  | 2   | 2                        | 2                         | 2                           |                           | 2                         |                           |                           | 2                         |  |  |                       |  |
| <b><a href="#">INDEX</a></b>   |   |                          |                           |                             |                           |                           |                           |                           |                           |  |  |                       |  |
| <b><a href="#">APPENDICES</a></b>  |   |                          |                           |                             |                           |                           |                           |                           |                           |  |  |                       |  |
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